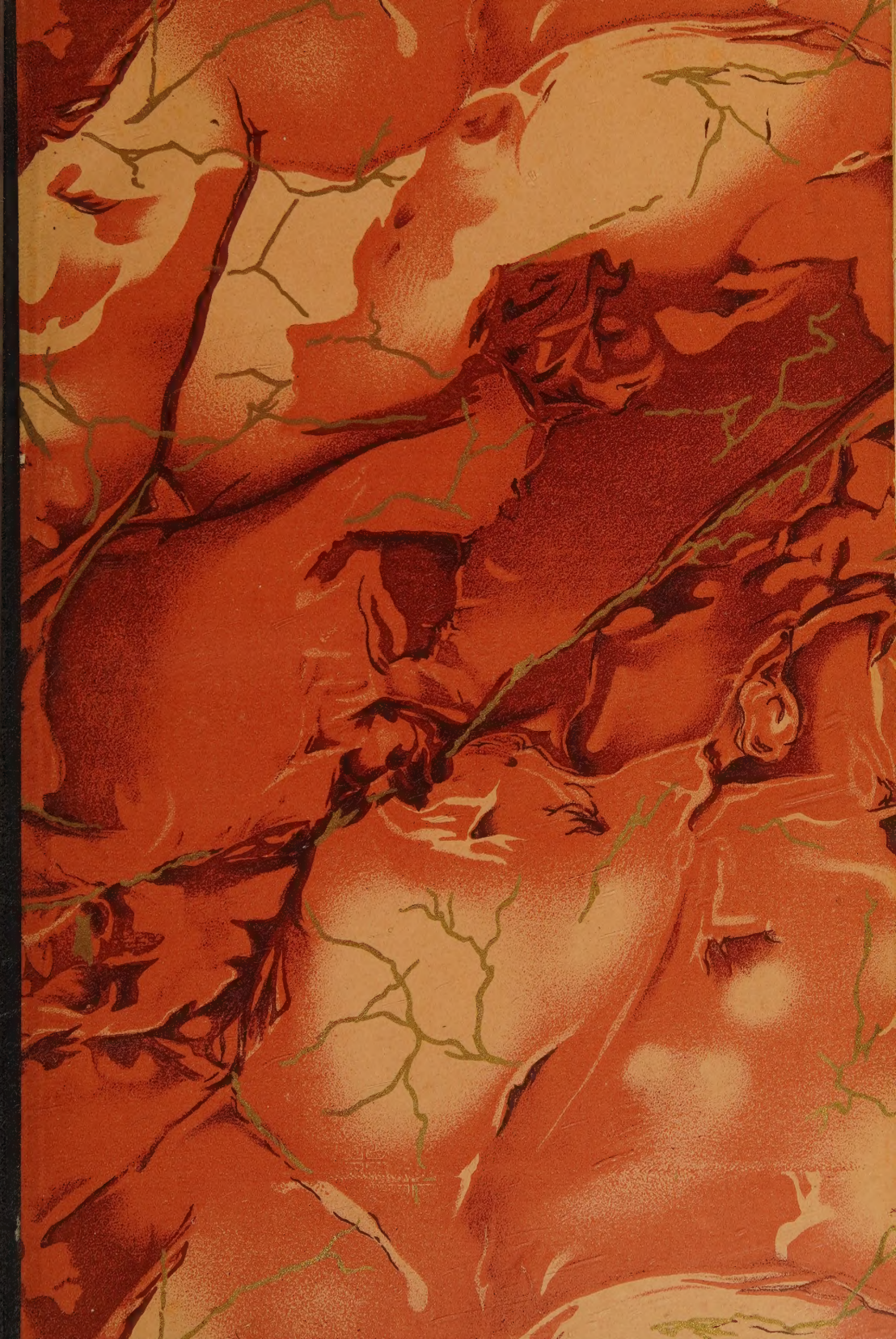

THE
AMERICAN HISTORY
AND
ENCYCLOPEDIA
OF
MUSIC

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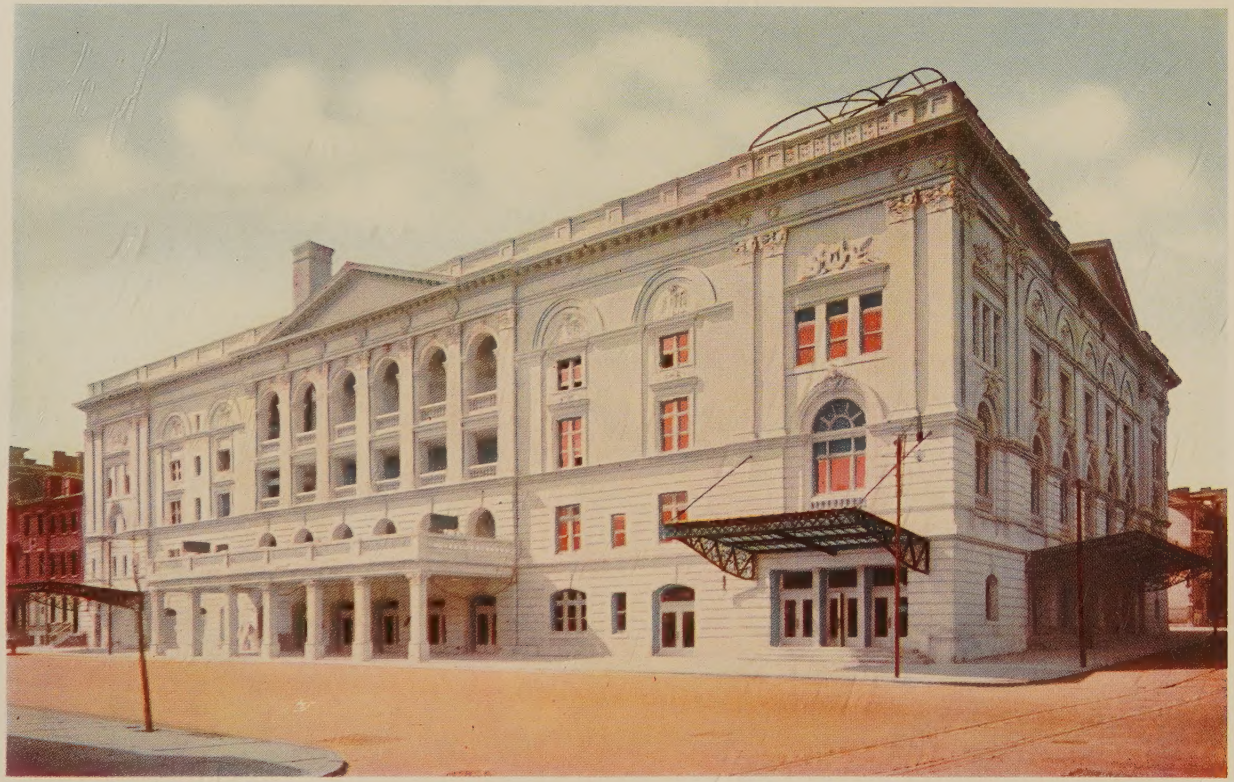

THE AMERICAN HISTORY AND ENCYCLOPEDIA
OF MUSIC

ESSENTIALS
OF
MUSIC

BY

E. M. BOWMAN HARRISON M. WILD CLARENCE DICKINSON
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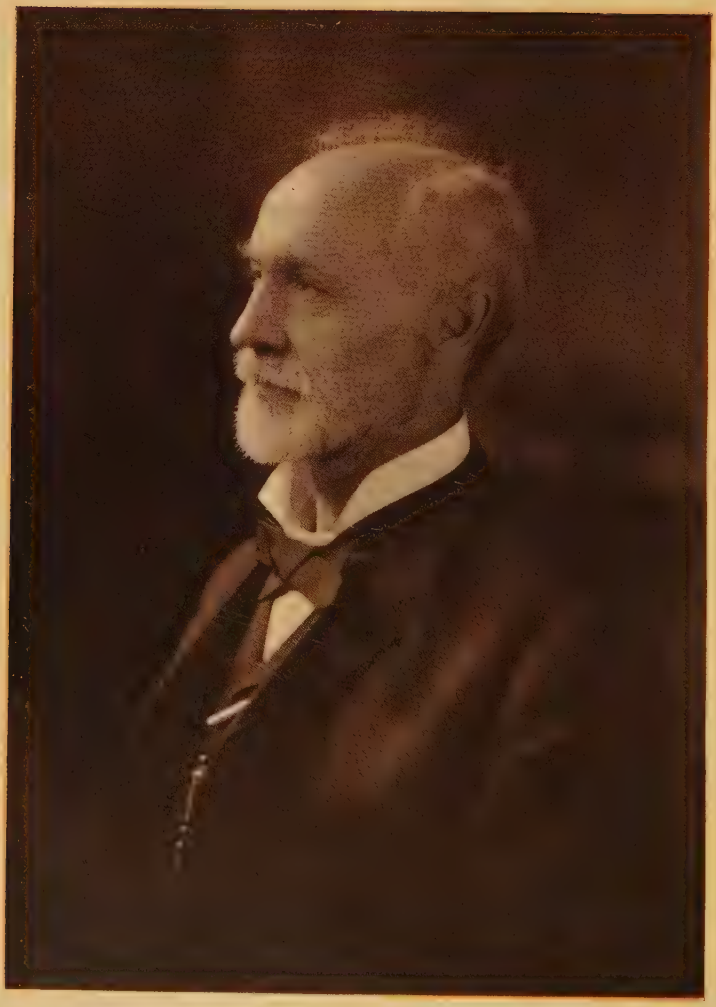
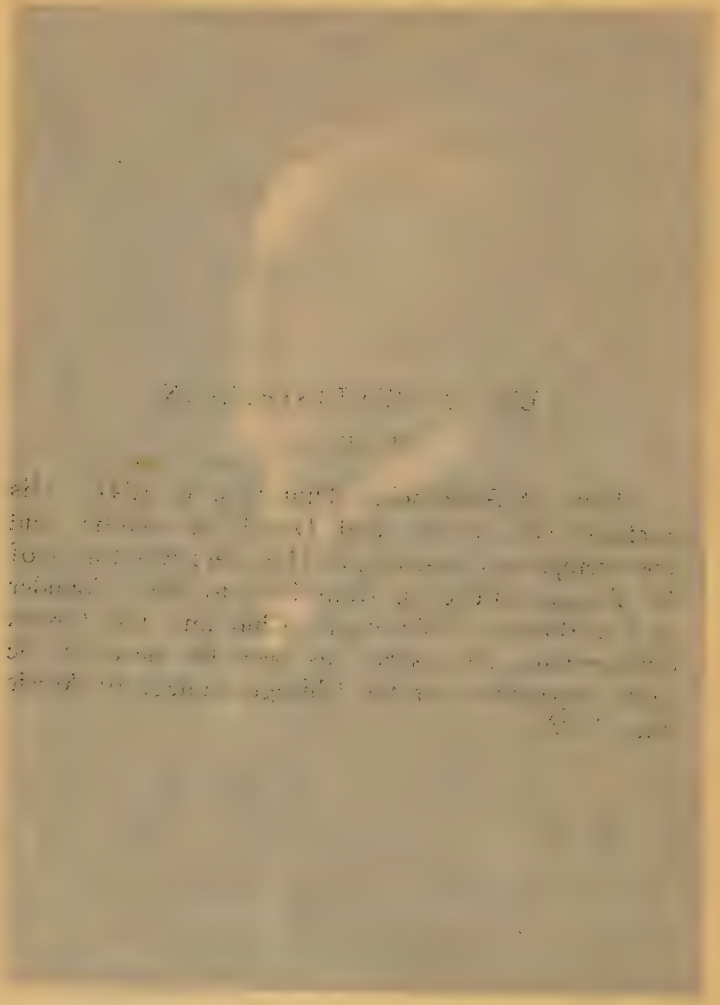


BERNHARD LISTEMANN

Violinist

Born at Schlotheim, Thuringia, in 1841. His teachers were Ulrich and David, at Leipsic, and Vieuxtemps and Joachim, at Hanover; was leader of the Thomas Orchestra from 1870 to 1874; founder of the Boston Philharmonic Club and the Boston Philharmonic Orchestra; has been the head of the violin department of the Chicago College of Music since 1893.



A STUDY ON VIOLIN PLAYING

IN EIGHT GRADES.

BERNHARD LISTEMANN.

ANALYSIS OF CONTENTS.

Introduction.
First Grade — Proper Elements of Violin-playing.
Second Grade — Study of the Higher Positions.
Third Grade — Easy Double-stop Exercises.
Fourth Grade — List of Study Works.
Fifth Grade — List of Technical Exercises.
Sixth Grade — Elegant and Elastic Bowing.
Seventh Grade — List of Concert Selections.
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A STUDY ON VIOLIN PLAYING

BERNHARD LISTEMANN.

INTRODUCTION.

The complete mastery of any task which confronts man deserves appreciation and apt admiration, but nowhere in higher degree than in the masterly rendition of noble music, because here intellect and sentiment work together and, when harmoniously supporting each other, produce a magnetic effect which is quite irresistible.

This art has, like everything else, a crude beginning. But its peculiar nature contains certain elements which are inspiring to the student, and after a fair advance in his chosen profession he will gradually forget the prosaic side of that primitive start. It is true, few reach the highest pinnacle of virtuosity, but with perseverance, a clear aim, willpower and intelligence even moderate talent may be so developed as to make the study of music a real pleasure. Violinplaying, of which the present article treats, requires at the beginning an understanding for certain matters of a mechanical nature, embracing the position of the body, arms, fingers of both hands and the holding of the violin. Some authorities of former years, among others J. P. J. Rode, pupil of Viotti, composer of numerous violin works and one of the really great violinists of his time, recommended a

slight leaning forwards of head, shoulders, and chest when playing. The advantages of this artificial position are not quite apparent while it is evident that freedom of the lungs is restricted. And this is probably the reason that Rode's method found only little response among his contemporaries.

Great violinists, pioneers and founders of celebrated schools, like Spohr, Paganini, Joachim, Wieniawski and others, had in the act of playing a striking resemblance to a well-grown tree, and not even in most passionate musical climates were they carried away in sufficient degree to lose physical self-control and present the appearance of a class of violinists who show their emotions by gazing fixedly at the floor below and by swaying the body rapidly to and fro.

The beginner has from the start to adopt an upright, natural position of his body. Later on, when he has advanced so far as really to understand and enjoy the music he is playing, and after his own individuality is more developed, the original, rigid position will surely lose some of its severity, perhaps so much so, that in case his nerves, or sentiment, or sentimentality, or all combined, get the upper hand, the danger may arise that the original correct position may gradually change into an unesthetic one. This possibly ought to be kept in mind always, and tendency to an incorrect posture religiously avoided.

Regarding the position of the feet, it is generally accepted as a rule to balance the weight of the body more or less on the left side, for the reason, that the right arm may be more at liberty to execute with the necessary freedom all physical motions.

It is necessary to hold the left elbow close to the body, the right some little distance away, particularly so when playing on the G string. The old German school taught the quite rigid adherence of right elbow to the hip, the French-Belgian school inclines more to the other extreme. The middle way may prove the better here as in many other things.

The violin must be held straight ahead, almost parallel with the floor, with right side inclining downwards a trifle. The left hand, while playing, ought to be turned out a little to the right, and the palm must not touch neck or side of the violin in the two lowest positions. Only from the third position upwards has it to rest on the violin. The eyes ought to be trained to look as much as possible only at the notes to be played, and as little as possible at the fingers. The more independent of the eyes the fingers are the easier will come the reading-at-sight. The fingers of the right hand must be curled over the nut of the bow and not held too close to each other, and the thumb must be slightly bent. The fingers of the left hand must rest on the strings in such a way that the knuckles nearest the fingertips are not straight but curved. Each finger must work by itself independently of the other, and the little finger must be kept directly over the strings throughout. The fingers ought to be trained to come down on the strings with considerable force, almost like miniature hammers.

These points, which touch only theoretical matters, are nevertheless of greatest importance, as they form fundamental laws, which, when followed out, will materially strengthen the structure of attainment.

FIRST GRADE.

Let us now observe the elements of violin-playing proper. The pupil will quickly enough understand the motion of the right arm in up bow and down bow, and it will be a great satisfaction to him to use gradually all his fingers and finally play a two-octave scale. Here now, in a certain sense, the study begins to take on more and more of the musical element, particularly if the teacher understands how to make the exercises more interesting through a variety of bowings and by persistently insisting at all times on a pure intonation.

The pupil must learn the difference between a soft-legato and a firm, steel-like staccato-bowing as soon as possible; he should learn by his exercises the different parts of the bow (nut, point, middle) and should play whole exercises, if their character allows it, with those bowings, also with upper — or lower half, or with a whole bow, both legato and staccato.

Beginners show too often a tendency to play nearly everything, particularly detached notes, in the middle of the bow, making this part the central point for their operations, with an almost entire exclusion of bowings which require the extreme point or the nut.

The teacher should not fail to encourage his pupil by having him occasionally study a small concert piece, as in this way the musical sense will be developed and expression and character become a reality to him. Pieces, which cover the requirements of this first grade in violin-playing, are written by

Carl Hauser, Op. 2.
Theo. Hermann, Op. 27.
Dancla, Op. 86, Nos. 8 and 9.
Dancla, Op. 123, Suites 1 and 2. (Fischer Edition.)
Ern, Op. 22, Gavotte.
Danbé, Op. 20, First Series: 6 pieces.
Danbé, Op. 30, Second Series: 6 pieces.
T. Miersch, Op. 33, Four little pieces.
Borowski, Danse Rustic.
Borowski, Three Morceaux.

It is utmost value to the pupil to play his piece, after the finishing touch has been given and before starting on some new work, quite often with piano accompaniment. Getting thus acquainted with the complete music of the piece (viz., violin and piano) he will gradually gain the necessary freedom and self-confidence in his playing, qualities without which a fluent execution is impossible.

The pupil, before starting with the higher positions, should have some knowledge of all major and minor scales, of the trill, turn and embellishments in this line, of staccato bowing, easy double-stops, and chromatic scales.

The writer of this article has published a violin-method which clearly illustrates the above mentioned points, including the different keys of the scales that follow each other in systematic development. The student of this little work can not very well help getting a pretty clear insight into the mechanism of violin-playing, which may considerably benefit him when confronting higher positions with their auxiliary pieces.

SECOND GRADE.

Let us consider now the higher positions and the pieces which require a greater efficiency than those before mentioned. For a study work I earnestly recommend the Second Book of David's Violin School, which gives numerous practical samples of the technical development and always in a systematic and thoroughly progressive way. This work will be to the student a true and inspiring adviser.

It happens not infrequently that in the study of the higher positions (from second to seventh) the pupil starts with third and only later becomes acquainted with the second position. This method, as well as the custom of picking out exercises in study works entirely at random and skipping to more difficult numbers, is wrong.

True enough, exercises in study works do not always follow each other according to their degree of difficulty, so for instance, easy ones may follow right after difficult ones, and *vice versa*. In such cases, single exceptions may be admissible and perhaps even advisable, but the principle, that a pupil should start with a new work, only when he is ripe and properly prepared for it, should be upheld.

The study of exercises (études) must accompany the study of higher positions, and necessarily has to keep within the range of those positions. For this grade may be recommended:

Fr. Hermann, Op. 29, Book 2 (Litolff Edition)
Kayser, Op. 20, Books 2 and 3 (Hatch Edition).
Dancla, Op. 74 (Finger Exercises), (Peters Edition).

Also concert pieces must be included here, but only those which reach up to about the fifth position.

The teacher, with an unbiased judgment about the accomplishments and deficiencies of his pupil, should here as well as in all the higher grades choose pieces which may promote either technic or expression and character in the student's playing. Desirable as technical accomplishments are, expression and character are just as necessary and may often be acquired only through industry and will-power.

The teacher need not necessarily choose only good music (in the best sense) to achieve the desired results. The more careful choice begins rather with the higher grades, and even here it cannot be avoided selecting sometimes pieces whose principal value lies in their brilliancy of technic.

It is self-understood that for our purposes only a portion of the material need be used (a suggestion which applies equally to all the following lists of compositions) or pieces of similar character and difficulties may be substituted for some of the above mentioned:

Dancla, Op. 89 (6 little fantasies).
Eberhard, Kobold-Taenze.
Leonard, Op. 4.
Leonard, Op. 33 — No. 2.
Becker, Romance in E flat.
Dancla, Op. 155, Op. 149, and Suite No. 3.
Theo. Hermann, Op. 101 (5 small pieces).
H. L. Case, " Sans Souci."

Simon —— Berceuse.
Fr. Thome, Simple Aveu.
Dancla, Carnival.
A. d'Ambrosio, Op. 6, Canzonetta.
Mascagni, Intermezzo (Franko arrangement).
Saint-Saëns, "The Swan."
Borowski, Adoration.

THIRD GRADE.

After mastering the seventh position it is necessary that the pupil, besides continuing in David's school, should start with Kreutzer's 40 Exercises (Litolff Edition) but up to the double-stops only, as by studying easier exercises in double-stops he will be better prepared for the last eleven numbers in Kreutzer.

Regarding easier double-stop exercises, there exists sufficient material, but particularly recommended may be:

Eduard Herrmann, 25 Double-stop Exercises, 1st volume (Schirmer Edition).

Concert pieces for this grade:

Viotti, 23 Concerto in G (Concert-Studies by David).
Bériot, Airs varie Nos. 5 and 6 (Schirmer Edition).
Wieniawski, Mazurka "Kujawiak" (Schirmer Edition).
Alard, Faust-Fantasie.
Raff, Cavatine.
F. Listemann, Op. 3, Berceuse.
Vieuxtemps, Op. 40, No. 3, Romance.
Svendsen, Romance.
Accolay, Concerto No. 1.

The first movement of the 23rd concerto by Viotti requires for its technical part extremely well-trained fingers and a solid, powerful bowing arm. The many detached figures in sixteenths have almost throughout to be played with a long bow more or less at the point. The melodies of the concerto, especially those of the adagio, require a noble

simplicity in execution and the student must here, as well as in all melodies of the older works, avoid becoming sentimental.

FOURTH GRADE.

Although the custom prevails of starting the 36 caprices by Fiorillo right after Kreutzer, it might be advisable to look through one or two other study works before Fiorilla. To be recommended are:

Tartini, 50 Variations (revised by David, Andre Edition).

Fr. Hermann, Op. 29 — Book 3.

Both these works (particularly Tartini) contain a multitude of bowings as well as rhythmical figurations, which elements are only sparingly found in Kreutzer and Fiorillo.

Concert-selections, corresponding with this grade, are in the following list:

Rode, 7th Concerto, from the concert-studies by David Hofmann.

Viotti, 29th Concerto, from the concert-studies of David Hofmann.

Vieuxtemps, Op. 22, Air varie.

David, Op. 5, "Little Drummer Boy."

Alard, L'Argonesa.

Leonard, Souvenir de Bade (Fischer Edition).

Viotti, 22nd Concerto (David Hofmann).

Beethoven, 2 Romances, in F and G.

David, Op. 16. Andante and Scherzo Capriccioso.

Kreutzer, 2 Concertos, in D major and D minor (David Hofmann).

Wieniawski, Legende.

Wieniawski, Mazurkas —"Obertass," etc.

Bériot, Concerto No. 9 (Schirmer).

d'Ambrosio, Op. 255, Introduction and Humoresque, (Schirmer).

Hauser, Op. 43, Hungarian Rhapsodie in D minor.
Corelli, Folies d'Espagne (Variations) (David Revision).
Spohr, Barcarole.
Bériot, Concerto No. 7.
Topper, Op. 23, Gavotte (Violin arrangement).
L. Schmidt, L'Espagnol.
David, Op. 3, Concertino.
Saint-Saëns, Romance in C.

FIFTH GRADE.

The pupils of this grade might start with
Dancla, Op. 73.....Études
Alard, Op. 19.....Études
Rovelli .....12 Caprices
Rode .....24 Caprices
and end up with a work by Cramer, 33 études, arranged for violin by Abel.

The technical character of Alard's and Dancla's études is that of more or less modern virtuosity and will certainly enlarge the musical horizon of the student and be a stimulus in this line.

Rode's work stands in its peculiarity unrivaled. Each number of the work is good music. The requirements of the student for the mastery of this work are manifold; an extremely powerful and clever bowing-arm, steel-like fingers, and a fluent technic. Joachim once mentioned to the writer, then his pupil, that for years he had played three to four Rode exercises daily and that the invigorating effect on his fingers was such that he knew of no other study work that excelled it in this respect. The metronome marks in these Rode caprices are valueless, hence should be ignored.

The Cramer exercises, an original piano-work, which has been arranged for the violin, should follow the study of Rode. The technic, upon the whole, is not as difficult as

Rode's, but as it contains elements of an entirely new technical nature, its mastery will be decidedly beneficial to the student.

Along with the study of these works the pupil may start with selections contained in the following list:

Spohr, 2nd Concerto.
David, Op. 6. Variations on a Russian Theme.
David, Concerto, No. 1.
Vieuxtemps, Ballade et Polonaise.
Vieuxtemps, Reverie.
Rubinstein-Wieniawski, Romanze in E flat.
Bazzini, Concerto Militaire.
Papini, 3 Hungarian Dances — No. 3 in et.
Godard, Concerto Romantique.
Paganini, Moto Perpetuo.
Vieuxtemps, Op. 40, No. 3, Bohemienne.
Ries, Suite No. 3, (principally Adagio and Perpetua mobile).
Hubay, Zephir.
Hubay, Hejrekati.
Wieniawski, Op. 12, No. 1, Mazurka "Sielanka."
F. Listemann, Idyll.
F. Listemann, Valse-Mazurka, Op. 10.
Schubert, L'abeille.
Schubert —Wilhemj "Am Meer."
Nardini, Sonata in D (David arrangement).
Vitali, Ciacconne in G minor (David arrangement).
Rust, Sonata in D minor (David arrangement).
Bollinger, Op. 6, Romance in C.
Sarasate, Romanza Andaluza.
Bach, Concerto in E.
Mozart, Concerto in E flat.
Gade, Op. 56, Concerto in D minor.
Sarasate, Mignon — Gavotte.
Wagner-Wilhelmj "Album-Blatt."
Vieuxtemps, Fantasie Caprice.

It may be of interest to the young student, who studies Vieuxtemps' Fantasie Caprice, to know that the composer wrote this work just previous to his sixteenth birthday, while convalescing from a dangerous brain fever in Riga, Russia.

SIXTH GRADE.

The following study works may be put in this grade:

Campagnoli: 7 Divertimentos (7 Positions) (Breitkopf and Haertel Edition).

Alard, Op. 18. Études. (German Edition.)

Vieuxtemps. 6 Concert Études.

Dont. Gradus et Parnassum.

Paganini. Études in 60 Variations. (Brietkopf and Haertel Edition.)

Wieniawski, Op. 18. Études-Caprices (with 2nd Violin).

Schradieck, Op. 1 — 25 Studies.

The 7 Divertimentos by Campagnoli is a great work.

The originality in giving a broad structure within so narrow a boundary as one single position, is striking and surpasses any attempts made by other composers in similar directions. The work requires broad bowing, plenty of tone and naturally very strong fingers.

The 60 variations of Paganini need for the proper interpretation elegant and elastic bowing, rather than great technic. They acquaint the pupil fully with every style of bowing.

CONCERT SELECTIONS.

David. 5th Concerto.

Sarasate. Faust — Fantasie.

Bazzini. 4th Concerto.

Spohr. Concertos. Nos. 8 and 9.

Vieuxtemps. Fantasie Appassionata.

Vieuxtemps. 4th Concerto.

Mendelssohn. Concerto.
Brahms-Joachim. Hungarian Dances, Nos. 1, 3, 5, 6, 7, 8.
Molique. Concerto No. 5.
Hubay. Carmen-Fantasie.
Bruch. Concerto No. 1.
Wieniawski. 2nd Polonaise.
Wieniawski. Souvenir de Moscou.
Sinding. Concerto No. 1.
Leonard. Souvenir de Haydn.
Sarasate. Gypsy-Melodies.
Saint-Saëns, Op. 28. Introduction and Rondo-capriccioso.
Tartini, Devil's Sonata. (Vieuxtemps' arrangement.)
Sarasate. Jota Argonesa.
Chopin-Sarasate, Op. 9, No. 2. Notturno in E flat.
Vieuxtemps, Op. 19. Concerto No. 2.
Wieniawski. Concerto No. 2.
Nachez, Op. 14. Dances Tziganes.
R. Krauss, Op. 8. Concerto in D minor.
Raff, Op. 67. La Fee d'Amour (Die Leibesfee).

SEVENTH GRADE.

The following study works are recommended for this grade:

Wieniawski, Op. 10. L'Ecole Moderne (9 studies).
Bach, 6 Sonatas for Violin alone. (Revised by David-Sitt.)
Gavinies, 24 Études. Matinees. (Peters Edition.)
Paganini, 3 Themes with variations on the G string.
Sauret, Op. 24. 20 Grand Études.

The Wieniawski work, Op. 10, as well as the same composer's work mentioned in the 6th grade, Op. 18, are notable for certain qualities, in which the composer particularly excelled, to-wit: remarkable

velocity in all technical matters, a manly character in melodious phrases throughout, an elegance and elasticity in bowing which made his playing so bewitching.

The last study of Op. 10 may be omitted, as it is unproportionately difficult. The Gavinies études require a well developed technic. However, they contain very little that is musical, showing little individuality in technical treatment and certainly no originality, for which reasons they should be considered simply as a study work, and no more.

The Paganini variations, written exclusively for the G string, is a work of great usefulness. Technical figures, as the experienced violinist knows, are harder to perform on this string than on any other, as here far stronger fingers and greater arm exertions are required to make the string vibrate and sing. The control of the G string will prove of real benefit to the student from a technical standpoint.

Although the supreme worth of Bach's violin-sonatas consists of the three great fugues and the charonne, there are so many valuable smaller pieces in these sonatas with partly antiquated names, that the student, properly prepared, should make a thorough study of them all. Not infrequently renowned violinists play whole sonatas in concerts, and it is almost a heavenly enjoyment to hear the slow movements of them played by virtuosos of temperament like Ysaye, and others. The crown, as a Bach interpreter, per excellence, belongs to Joachim, for it was he who introduced the complete works to the musical world. It was especially his in interpretation of the famous charonne, which has won the colossal composer more friends and admirers, than did any of his numerous other works.

Concert selections for this seventh grade are:

Bruch, Op. 46. Scotch Fantasie.
Lalo, Op. 21. Symphonie Espagnole.
Vieuxtemps. Concerto No. 5.
Lipinski. Concerto Militaire (1st movement).

Beethoven. Concerto.
Bruch, Op. 42. Romance in A minor.
Thompson. Passacaglia on a theme by Handel.
Wieniawski. Faust-Fantasie.
Wieniawski. 1st Polonaise.
Wieniawski. Valse Caprice.
Paganini. Prayer of Moses (on the G string).
Bruch. 3rd Concerto.
Laub. Polonaise.
Bazzini. La Ronde des Lutins.
Joachim. Variations.
Sarasate. Muineira.
Sarasate. Zapeteado.
Joachim. 3rd Concerto.
Spohr. 7th Concerto.
Auer. Op. 2, Tarantelle de Concert.
Wieniawski. Tarantelle in G minor.

EIGHTH GRADE.

Of corresponding, difficult exercises for this highest grade, there are comparatively only a few. But in this respect the student, who has worked his way up to this height, has probably acquired sufficient experience to look around for himself in the realm of violin music, and depend upon his own judgment. I will mention as a study work only one which generally is regarded as eclipsing all others:

Paganini. 24 Capriccios. (Breitkopf & Hærtel Edition.)

Of his work the writer of this article wrote in a treatise on Paganini, in a magazine some years ago: "Great, and a master work in every sense, are the 24 capriccios for violin. They are short and concise in form, but possess such a pronounced character, and document a source of such inexhausible technical possibilities, that all that has been written since on the high-grade technic plan simply pales before this work."

It is advisable to have the pupil, when starting this work, begin with capriccios 13 to 24, and only later undertake numbers 1 to 12, as the first 12 capriccios are far more difficult than the later ones.

Concert selections belonging to this grade and requiring a highly developed technic, will be found in the following list:

Ernst. Othello-Fantasie.
Ernst. Airs Hongrois.
Paganini. Concerto No. 1 (1st movement, Besekirski revision).
F. Listemann. Concert-Polonaise in E.
Saint-Lubin. Lucia-Sexteti for Violin alone.
Wieniawski. Carnaval Russe.
Wieniawski. Op. 15, Theme Original Varie.
Chopin-Wilhelmj. Notturno in D, Op. 27, No. 2.
Ernst. Concerto in F sharp minor.
Bazzini. Op. 15, Concert-Allegro.
Bruch. Concerto No. 2.
Vieuxtemps. Op. 10, Concerto No. 1.
Brahms. Concerto in D minor.
Tschaikowsky. Concerto in D.
Joachim. Hungarian Concerto.

The first concerto by Vieuxtemps (E major) which for a long time was the test for every virtuoso of distinction, was composed in his 19th year and introduced by him in Paris with immense success. Shortly afterwards appeared his 2nd Concerto (in F sharp minor). But in reality this 2nd Concerto had been composed four years before and as Concerto No. 1 turned over to the music-firm, Schuberth & Co., to be printed. For some reason or other the work was ignored by the music-house. With the great success of the E major concerto in Paris, the firm seemed to have gained confidence in the young composer, and perhaps realizing the financial result, speedily printed the neglected work as Concerto No. 2.

This is the version of the composer to the writer when studying this concerto with him, and was corroborated by one of the publishers, by whom the writer was befriended.

Regarding the Concert-Allegro by Bazzini, the most musical of his many compositions, the writer may be pardoned for giving here a reminiscence which he treasures very highly. He, then a 16 years' old pupil of David, played this concerto at a concert in Leipsic, and had the great honor of having as his accompanist none other than the great violinist and composer, Bazzini, himself, who, after having the previous day been the soloist at the Gewandhaus concert, remained a day longer in Leipsic in order to hear his composition.

The Hungarian Concerto by Joachim is by many considered the most difficult composition of the entire violin-literature. A long study, even by the best equipped technician, is required to master the many unusual difficulties, as also to bring out the tempestuous spirit of the last movement, the Finale a la Zingara. As really noble music this concerto belongs to the very best we have, and only abnormal difficulties and great length of the composition prevent a popularity with violinist, which it richly deserves.

With this carefully assorted material, of which the writer has availed himself more or less during many years of teaching, is indicated a systematic study-course. It is not expected of the teacher that he be intimately acquainted with all these works, although the competent teacher knows many of them. And this conscientious teacher will never be at a loss what to give to his pupil, and certainly will not commit the grave error of recommending things which are far beyond the ability of the student.

It is advisable to bear in mind that the selections for the pupil should be at all times made with a view of gaining for him a necessary many sidedness in his playing, and so, for instance, have him study, after a very difficult piece, something less difficult, but requiring more expression, tone, ele-

gance, or *vice versa*. That gives the student a breathing spell and forces him for the time being, to cultivate an opposite element and thus broaden his playing.

To be considered yet are the many, more or less valuable works which treat finger-technic as a specialty. The teacher, naturally, and for very good reasons, will not overburden his pupil with these studies, if the desired results are to be accomplished. And again the pupil will not feel the dryness of these studies, if he goes ahead with them rather slowly. Also the physical conditions of the fingers differ so greatly that strong and supple fingers need less of this kind of study, while the pupil with weaker fingers will achieve only the very best results after a careful study.

The following are some of study works of merit and to be highly recommended:

Sevcik. Development of the left hand.
Schradieck. Scale studies.
Schradieck. School of Violin technic.
Eduard Herrmann, 25 Double stop exercises, second book.
Lichtenberg. Scale studies.
Keller and Schell. 275 Studies (books 3, 4 and 5).

Only one work need be studied, as they all pursue the same aim, starting from the easiest and gradually leading to all imaginable technical difficulties. The teacher, who is familiar with these works, will easily find the most useful for his pupil.

Before the pupil ends his regular study courses, he should acquire some knowledge of ensemble-playing (piano and violin). In sonata-playing the teacher should start him with works of our classical composers, particularly of Mozart, and Beethoven, and only gradually advance toward compositions of our own time. The technic of those older works requires well-trained, solid fingers, perhaps in a higher degree than that found in more modern works.

One of the good results arising from the study of the old masters is that the student comes to understand the simple construction in phraseology and form-matters in the classics to the effect that he with such knowledge will have gained a riper understanding for the freedom and elasticity in expression and execution so necessary for the more modern works.

The so-called Kreutzer Sonata by Beethoven, Op. 47, ought to be studied only when the pupil is equal to the task. It is the highest test for all ensemble-playing in this line.

Regarding the possibilities of the student entering the orchestral field, it is impossible to speak in a very encouraging way. The opportunities in America for aspirants are not very favorable, not even in larger cities, on account of the lack of orchestras. Our young musicians, if in a larger place, will be limited in gaining experience to a piano trio, or a string quartet, or, perchance, join the small band of musicians employed at theaters and resturants. If otherwise his abilities are properly developed, he may after some experience in this field, find opportunity to play with some regular orchestra of smaller dimensions, and then it will be a matter of industry, of aim, ambition and some little luck to find the chance of joining one of the few first-rate orchestras in America.

However, that is, the teacher, knowing all these conditions, and teaching a talented pupil who possesses the necessary requirements and pursues the higher aims in art, should use every opportunity to acquaint him in prima-vista-playing. A course, which cultivates this branch of study, is of incalculable benefit to the student. An observation which the writer in his long career as teacher often made, is the pupils lack of preparedness when he starts to teach. It seems to be absolutely necessary that, after finishing his studies, he should go through a course of special " Teachers

Studies," and under the guidance of his competent instructors overhaul the material that is needed, (exercises and concert-selections) for the lower grades particularly.

The able student, after having gained in this way a practical insight into the mechanism of teaching, will have little difficulty in going ahead unassisted, the more so, as all the more advanced studies belong to a period which for the most part is still fresh in his memory.

In general too little importance is given in America to the functions of a teacher. Competent and incompetent teachers are often valued alike by an unknowing public.

Business ability in an incompetent teacher may achieve better financial results than the merits of a teacher who lacks this valuable asset. This capacity has become a factor in our music life and the pupil very often has reason to repent of his time and money misspent in this way.

It might prove a beneficial law to have every young musician, who wishes to take up the vocation of teacher, examined by a commission of violinists, in larger places only, and settle in this manner at least the point, that unpreparedness and incompetence shall not claim the same rights and privileges as experience and competence, and that the young teacher might learn to appreciate the fact, that the profession of teaching is to be considered a credit and honor, and not the means to beguile innocent victims.

What is there more honorable and satisfying than to be the educator of a talented musician, to have kept him always in the right path so as to have him reach the highest goal, to which talent and effort entitled him, to have followed him in his progress with deepest interest and sympathy, to have his errors and shortcomings gradually rooted out, to have awakened his enthusiasm for new and greater

tasks, and finally to have seen him arrive at the point, where he occupies an acknowledged, independent position in the world of art and artists. This gives a similar satisfaction to the musical educator as it does to the father, who knows he has done his best for the welfare of his children.

May these illustrations, which are largely based on experience of the writer, have the good result of diverting the efforts of the teacher constantly towards the development of the highest ideals of the pupil, so that this pupil, long after he has left his teacher, may think of him with deepest gratitude.

THEODORE SPIERING

Violinist

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ADVANCED VIOLIN INSTRUCTION

A GRADED COURSE IN TWELVE LESSONS.

THEODORE SPIERING.

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ADVANCED VIOLIN INSTRUCTION

THEODORE SPIERING.

INTRODUCTION.

It is difficult to give, within the limits of a scant dozen lessons of alarming brevity, an outline of the technic of the violin. As will be apparent during the perusal of the following lessons, only the most fundamental and essential technical points have been touched upon, and these only in a most cursory manner. The more fundamental ideas, the positions of the hands and arms, the development of tone, etc., have been treated more at length because the most important steps in the acquisition of violin technic are undoubtedly the first. The development of even these essential ideas has been limited to the fewest words and, in some cases, only a suggestion of the lines to be studied has been offered. It will, therefore, be found necessary for the student to carefully read and digest the entire material before making a beginning in applying the principles discussed. It is obviously impossible to discuss in the first lesson all of the necessary first principles which arise and the reader will find that material in various suitable places throughout

the entire twelve lessons. Being a summary, rather than a discussion of principles and effects, the lessons should be considered as a whole and not section by section.

The student is not to be offended by the constant reiteration of certain technical points since they may be regarded as the pivotal principles in the technical development. In a written work, where the personality of the teacher cannot be injected as at the private lesson and where words may mean much or little, depending on the individuality of the reader, every sentence should be carefully read and examined and the principles applied only after concentrated study.

Though it is believed that these lessons contain all of the essential ideas necessary to the development of a satisfactory violin technic, yet there are certain fundamental principles existing beyond mere technical development which have an important bearing upon the subject. The question of mental preparation, of relaxation, despite the exertion of muscular force and of equalization of technic rightly belong in a method of violin study and yet in a technical treatise of this length the consideration rightly due them is almost an impossibility.

No technical or musical subject in violin-playing should be approached without the necessary mental preparation, that is, a mental conception of what is to be done. Putting aside the question of knowing what one is to do when trying to acquire a tone, or a certain position of the left hand, as an obvious necessity, it should be just as obvious that no passage should be approached until the brain has first mastered it and directed its performance in a certain manner. For example, a rapid staccato passage, a glissando run, or any similar technical feat, will suffer in clarity, evenness and distinctness unless a definite mental conception is had of each note before it is played. The brain must be kept alert and ever in advance of the fingers and must definitely direct every physical and emotional portion of the musical expression.

The question of relaxation in spite of physical exertion is also important. Relaxation, to many, erroneously means limpness. It is an almost undefinable term and is neither limpness nor rigidity but a condition midway between the two in which the muscles remain firm but are allowed to move freely at any speed and with any amount of force. To trill rapidly and with sufficient force to make the tones distinct requires the highest standard of relaxation and great strength. It is absolutely necessary to drop the finger with sufficient force to clearly stop the string and yet it is as necessary that the finger move with great rapidity, a product of perfect relaxation. It can readily be seen, therefore, that relaxation and force are not incompatible allies in violin-playing, though the balance between the two is very finely hung.

Closely akin to this is the independence of technic. Much bad bowing is due to the fact that upon the arrival of a difficult left-hand passage the player is unable to differentiate between the left and right arms and therefore shows in the right arm that which is bothering the left hand. A similar condition arises when the player finds that he is forced to play a passage at the point of the bow when he would rather play it at the nut, or similarly, when he is compelled to use fingering unsuited to his technical equipment. Practise should be had to remedy these conditions so that the arms and hands may be independent of each other and so that any passage plays as easily in any part of the bow or with any fingering.

The province of interpretation, of musicianship, is such a big one that in touching upon it the writer is well aware of the utter impossibility of doing justice to it in a short paragraph. However, attention must be called to the ever-growing tendency of the young violinist to give himself up entirely to the all-engrossing pursuit of technic, that of a digital kind, and forgetting that all of this dexterity on the

part of the left hand is worse than useless when either the right arm has not been properly developed, or what is even worse, the musical foundation has been sadly neglected. The study of theory, ensemble practise, a few years spent in a first-class symphony orchestra, membership in a string quartet with high ideals, a teaching experience, these are the real fountains of technical knowledge and experience and the broadening effect of such experience upon solo playing is immeasurable. It is unfortunate that the value of these experiences is not recognized until they have been neglected and it is too late.

However, the individuality of the student, together with the opportunity of hearing great artists and studying with a teacher, himself an artist and serious musician, is after all the question of paramount importance. This work is, therefore, not intended to replace the teacher either from the standpoint of technic or musicianship. It is only to supplement his work and act as a reference of authority to those in doubt.

LESSON I.

Relation of Body to Instrument.

The more natural the positions assumed in the playing of the violin, the better the results attained. There is no instrument which responds more quickly to proper handling nor which demands more ease and relaxation in position.

The Spohr position, the weight resting mainly on the left foot with the right slightly advanced, still remains the most sensible one, freeing the right arm, though the position in which the weight is evenly distributed on both feet rightly has its advocates. As a rule, each player should assume the position which gives absolute freedom to the right side of the body, and therefore the right arm, and, at the same time, gives stability of poise. Swaying from side to side,

or other unnecessary movements of the body, are to be avoided, at least, until the player is a full-fledged artist and a law unto himself.

Left Arm.— The position of the left arm cannot be absolutely fixed but must remain an open question largely depending upon individual needs. However, the left elbow should be neither too far under the violin nor projecting in the opposite direction lest it assume a strained position, a condition to be avoided at any cost. The ability to quickly and systematically get over the fingerboard depends in a great measure on the freedom of the left hand and arm (the violin should be held firmly by the chin and shoulder, for this reason, a pad being used if necessary); and on a free and correct manipulation of the left thumb in shifting.

Left Hand and Thumb.— The contact of the neck of the violin and the left hand should be between the second and third joints of the first finger, the thumb being applied a little above the first joint. The thumb should be placed opposite the first, or the first and second fingers, depending entirely upon the character of the individual hand. The player must find a natural and relaxed position for this most important member of the left hand. Pressure is not prohibited, but relaxation must always follow, in order that hand and fingers do not become strained.

Fingers of the Left Hand.— The left hand should be held in such a position that the fingers fall easily and naturally on b, c (c sharp), d and e, on the A string, in the middle of the tip of the finger. There should be no cramping, no adhesion of thumb and first finger, first and second, etc. Each finger should work independently of the others, and of the hand, from the third joint, the hand at absolute rest. Flexibility and velocity depend on observing the above, while body of tone, resulting from strength of fingers, is gained by practise, or repetition, and not by studied effort. The hand should be held in such a position that each finger

may retain a slight arch. A straight or stiff finger means effort and consequent loss of strength, flexibility and velocity.

Fingers of the Right Hand.— It is advisable to adjust the fingers of the right hand on the bow in this manner: open the palm and extend the fingers in the most natural manner, place the bow (by means of the left hand) on the out-stretched fingers so that it will rest in the first joint of the first finger and on the tip of the little finger, and then gently close the hand bringing the thumb and fingers toward each other so that the former will be opposite the middle fingers and, as stated above, not in a flat position with the knuckle turned in but slightly arched out.

However, before giving the pupil the bow to hold it is best to demonstrate to him the most natural and relaxed position of the right arm. Have him drop his right arm so that it falls in a most natural position, noting that this is with the palm of the hand next to the body. Of course, the angle of this position cannot be exactly maintained when the bow is on the string, but keeping this original position in mind will prevent the student from going to the other extreme, i. e., the common error of forcing the elbow out by too much pressure on the bow by the first finger instead of evenly distributing this pressure among the middle fingers and thumb.

Following up this idea of the normal or natural position of the arm, attention should be called to the position of the thumb in the bow. The usual tendency is to apply it to the bow as if it had its normal position at the foot of the palm of the hand, instead of at the side. This side position of the thumb on the bow is of the utmost importance, as only in this way will the knuckle remain out and the consequent freedom of hand movement be realized. The bow is to be held with the middle fingers and thumb, the first finger guiding, the little finger balancing.

Right Arm and Slant of Instrument.— The right arm should not be held too close to the body, as formerly taught, but should, at all times, be held in such a manner that each string level is primarily considered, the arm remaining absolutely on one level as long as the bow remains on one string, no change in position (dipping) taking place in the progress of the stroke from frog to point. Close observance of the foregoing *must* lead to a free arm stroke. The slant of the instrument is more or less determined by the position of the arm when the bow is on the G string. When on this string the arm is in an almost horizontal position, the slant of the instrument just permitting the bow to pass over the left bout. When the bow is on the E string, the arm must not be too close to the body.

LESSON II.

First Attempts at Bowing.

The bow being the medium of expression, the means of differentiation in the moods of compositions, the greater the freedom of manipulation the greater the command of nuance and the nearer the approach to the meaning of the composer. The following recommendations are designed to promote the development of freedom:

As in singing, breathing or phrasing is all-important. The ability to phrase depends, to a great extent, on the ability of the bow to leave the string, at any moment. This should be accomplished, not by lifting the bow from the string by means of the arm (except in ertain cases to be cited later on), but through the medium of the right hand and fingers only. There is a certain fear of letting go of the bow, also tendency of interrupting its progress on the string, which the following exercises are designed to overcome. A common error, much indulged in and due to not recognizing the true mission of the right arm, is the con-

stant retention of the bow on the string without regard to phrasing. This becomes a constant deterrent on the development of bowing. One of the most important problems is to counteract this inertness of the right hand.

THREE DIVISIONS OF THE RIGHT ARM.— Difficulty arises in trying to use separately, or in conjunction, the three divisions of the right arm, the upper, lower and hand, according to needs. The lower arm, from the elbow down, is not used enough. The playing allotted to this section of the arm is most often done in the middle of the bow with the elbow in a locked condition, and the upper arm making faulty backward movements in place of downward ones by the lower arm. The upper arm is brought into play only on approximately the lower third of the bow and, of course, in the crossing of the strings.

In place of commencing with the legato stroke, it is better to begin with the martelé or, to be more exact, the détaché stroke done the full length of the bow with the entire arm. In the effort to draw the bow to the end, the tendency is to draw the arm back, this going so far as to cause a locking of the elbow, both of which are to be avoided. Instead, a hand extension is advocated as a means for connecting strokes.

This lateral hand extension, or wrist stroke, is more easily obtained in conjunction with the release of the thumb, i. e., taking the thumb from the bow and permitting the latter to rest in the palm of the hand. This hand extension, later on, must be accomplished with the thumb in position. Taking out the thumb brings relaxation and incidental wrist movement which is of the utmost importance to all bowings. Hand extension, in martelé or in legato, is the safety valve against stiffness of the arm. The hand extension on one string must be lateral (in the same plane), and not up and down. Taken in connection with the crossing of the strings, an elliptical movement results, being a combination of lateral and up and down motion.

Although this wrist stroke or hand extension is of the utmost importance, it has been found advisable not to center the attention of the student exclusively on this feature of the bowing, but to immediately call into play the entire right-arm stroke, a series of exercises being devised which will develop the hand extension along with the free full arm stroke.

The use of the full arm martelé stroke at this point is advisable because the necessary pause gives the student time for mental preparation; the character of the stroke forces the arm to remain in one plane; and, it forces the whole arm stroke to be exact and free. The pause before the stroke also gives time to prepare the left hand. At this point it is well to call attention to the fact that conscious mental effort must always precede the movement of the bow or the fingers and that a constant aural vision of the next tone is necessary for the prevention of faulty intonation.

In crossing the strings from a higher to a lower level, the result of bringing the arm to the lower level by retaining the bow on the last string, is to cause the hand to assume a transitory position which must be released and a normal position assumed before actual playing is resumed.

Exercise I. — Place the bow on the string at the point and apply as much pressure as possible with the fingers without affecting the position of the arm. Take as rapid a stroke as possible, at the end of the stroke at the frog, taking out or releasing the thumb.

Exercise II. — Exercise I. to be repeated on the down stroke, with this difference: after the down stroke, done as rapidly as possible, the connection of the stroke being done by wrist extension, return the bow *over* the string, releasing the thumb as in Exercise I. This down and up stroke must be considered as one stroke, being meant to return from frog to frog as quickly as possible.

Exercise III.— A second down stroke, or up, taking the bow from the string by means of the hand, not arm

(thumb, first and little fingers), at end of stroke, the arm not to be brought into action during the lifting of the bow, the bow leaving the string wherever the stroke ends. In the attempt to take the bow from the string do not farther extend the arm.

Exercise IV.— Apply the martelé principle of pressure, stroke and relaxation to hand or wrist stroke only, leaving thumb in place. This martelé hand stroke should be done at the point and frog.

Exercise V.— The same application to the full arm stroke with hand extension and without removing the bow or thumb. This may be considered as a martelé stroke though it leads to the legato.

Exercise VI.— As a means of illustrating to the pupil that the hand must be in the same relation to the bow at all times, draw the bow up and down over the string as slowly as possible, causing him to note the unchanging position of the hand at all points.

LESSON III.

The First Position.

There must be one position in which the hand of the beginner adjusts itself to the violin and, of necessity, this is the first position, not because it is lacking in complications or is musically limited, but because, as in everything else, one must begin at the bottom to conquer the ground step by step. Two octaves and a major third from the open G string to the ♭ natural above the staff is the range of that musical territory known as the first position on the violin, and its conquest represents laborious and crucial efforts to the beginner and problems of no mean technical difficulty to the student of classic literature.

The open strings, tuned in the perfect fifths, G, D, A, E, are at once made the medium of the early bow exercises, as

in this way the beginner's attention can be centered on some of the vitally important functions of the right arm and hand. The pupil is then taught the hand and finger positions, the application of the fingers to the fingerboard and the elementary principles of the trill.

Here, it is well to point out the old truths that first impressions are the strongest and therefore the most difficult to remove, that habits and faults acquired while learning these first steps will always crop out again as stumbling-blocks in the future development of the student, and that, on the other hand, the fundamental principles of correct hand and finger disposition, of natural and free finger action, followed by natural relaxation, will be helpful adjuncts in the rapid acquisition of what is commonly styled technic, but which is only the most natural and effective carrying out of what the mind prompts.

The fingers should be treated as independent units, that is, the motion should come only from the hand joints. The finger about to be used should hang reasonably near the string and should confine its movement to dropping directly on the desired spot. The palm of the hand should be neither rigid nor affected by the movements of the fingers. It is well to call attention to the fact that all great technicians avoid an extreme raising of the fingers while playing.

The stopping by the fingers should be accurate, in tune, and should not be done with too much exertion. The finger strength necessary to create sufficient body of tone must develop gradually through careful and effective practise and not through a great exertion of force in dropping the fingers. It is not objectionable for the thumb to press rather firmly against the neck of the violin while in one position, providing the proper relaxation occurs later, through correct shifting. After these preliminary principles are established there remains but the other left hand problem, that of shifting: the ability to move the hand from position to position either by step, one position at a time, or by a leap connecting tones

and positions at a distance from each other, without in the least interrupting the fluency of the musical phrase.

As correct intonation is one of the most essential features of violin playing, a student cannot too early train his ear (in reality his mind), to the careful and minute differentiation of pitch. Preparation in finger application is a method heartily to be recommended, with the accompanying mental effort of always bridging over the interval from the note being played to the next one, and consequently having an aural vision of that next note before actually playing or reproducing it. This ability to think in intervals, and not to play the notes as independent units without relation to each other, is a very important principle to be observed in the study of the instrument. And not only does correct intonation depend on this system of thinking consecutively or polyphonically; musical development is impossible without following these lines.

In order to quickly establish what is considered a correct hand and finger position the stopping of various chords is often advocated. This usage successfully calls attention to independent position of fingers, but if carried to extreme, results in a strained position of hand, whereas just the opposite is desired. For a beginner or for small hands the stretching over to G string (purely for the establishing of a fundamental position), is forced and should be avoided.

It is advisable to first establish the beginner on the A string, as both right arm and left hand are in most convenient position, stopping the notes b, c (c-sharp), d and e, these elementary five note exercises being repeated on the other strings. As soon as the fingers have attained sufficient routine in playing these exercises, the scales may be used in the order of G, D, A, etc., through one, or in case the position is not left, through two octaves.

Chromatic scales are valuable, in simplified form, in developing finger positions and as exemplifying a phase of shifting when the thumb remains in one position, as later in

the glissando. In this form of scale the note itself is to be given the greatest possible amount of time and the shifting of the finger to be accomplished as rapidly as possible. The reverse is almost always to be noticed; namely, a slow groping or sliding from note to note, the note itself hardly being articulated. In playing the scales, in fact at all times, immediately after each tone is played, the finger for the next tone is to be placed in position, the bow never attacking the tone until the finger is firmly placed. This requires careful attention to the position of the finger so that the only time consumed is in the actual playing and not in the finding of the proper place on the string. It is wise to keep all of those fingers on the string, without tension, which are not being used, since in this way they are ready when needed.

Faulty and Unusual Finger Positions.— The first finger should be so held that the application to the string be directly downward and not drawn back so that it will have to seek a higher position on the string before or after falling. One cause of faulty intonation arises from drawing down or extending one finger, thereby pulling the others along instead of keeping them in place irrespective of the temporary change of position of the one.

The young beginner who has not given sufficient attention to the mental preparation spoken of above (placing the fingers before the time of playing the note), will often forget that only perfect fifths occur opposite each other on the strings and that, therefore, when this interval is either augmented or diminished, it is no longer possible to simultaneously stop both strings with the same finger — but that an extension or a drawing back of the finger to be used is necessary before application to string is in order. The playing of these intervals (crossing over from one string to another with the same finger), is only advisable in rare cases, as in rapid passage work, for instance, this mode of fingering is not only awkward but untenable; the nearest finger being used to play the second note. The intonation

of augmented and diminished intervals in general (owing to tendency of the beginner to curtail extension and backward movement of fingers), is easily faulty. An exaggerated idea of augmentation and diminution in such intervals will therefore do no harm.

The perception of the young student should at once be trained to realize that even while playing the open strings, or the very first scales, that tone development is possible, being merely a peculiar combination of the application of the fingers of the left hand (with a subsequent reinforcement of the vibrato), and adept bow manipulation, pulling the tone rather than pressing on the string, and that even the open strings can be made to respond in such a manner as to yield warmth of tone. This is merely a proof that right arm legato playing is really the foundation of tone and that vibrato fulfills its function when it adds only to the intensity.

LESSON IV.

The Second and Third Positions and Shifting.

A correct knowledge of shifting, together with the proper application of the principles that govern good hand and finger positions, will give the student absolute command of the fingerboard.

The left thumb is a prime factor in maintaining relaxation in the left hand, so essential to freedom of movement. Whereas a certain amount of satisfactory playing can be done in each position with more or less tenseness in the hand, such a condition prohibits a free moving from one position to another. Playing in a higher position is merely transferring the principles applied in the first position to a higher place on the fingerboard. The ability to get over the fingerboard, to go into different positions, depends on a clear understanding of shifting, or a methodical way of connecting these different planes or positions.

Every step of the diatonic scale, beyond the b above the staff, the limit of the first position, adds one new position, a new realm to be covered. The difficulties arising from this new field of action are not so much of a technical nature as they are mental and aural; the tones which have, so far, been produced by one set of fingering are now given over for reproduction to another.

There is no reason why the positions should not be learned in consecutive order. Students taught in any other manner avoid the second, fourth and sixth positions and always develop technically in a one-sided manner. The habit of teaching the third position before the second is reprehensible and may be regarded as an open acknowledgment of fear, as far as shifting is concerned. The principle of correct shifting should immediately be so well established that the matter of position becomes a question of secondary consideration.

The natural limits (owing to location) of first and third positions are so well defined that the hand quickly feels at home in these positions, and with a rare excursion to the half position does not seek a lower position on fingerboard or, because of body of instrument, is not apt to creep above the third. The other positions do not possess these decided limitations and so offer more opportunity for inexact playing. However, the student cannot go far astray if he will use the same hand position as in the first and third, in all positions, with only the necessary change in the position of the thumb.

The fear of letting go of one position to go to another, on account of the imperfect knowledge of shifting, is so great on the part of the beginner that the tendency is almost always in evidence to reach for a note in a higher or lower position by an extension of the finger instead of shifting the hand. This should be avoided and the shifting done with the hand, the finger to be used not being placed on the string until the hand is absolutely in the new position. There are

exceptions to every rule and so there are times when a note in a passage or phrase can best be played (taste requiring this) by an extension of the finger to another position while the hand remains stationary, the playing in the original position immediately being taken up after this excursion to another position on the part of the finger.

There are also times when taste demands that a portamento from the open string to a tone in a higher position be employed. This may be brought about by lightly resting the first finger on the string below the saddle and proceeding as in ordinary shifting whether the note to be shifted be on the same or another string.

The Left Thumb and Shifting.— In moving to the second or third positions from the first, the thumb retains its position with relation to the hand, the hand and thumb moving as a unit. In descending, the latter precedes the hand, going almost beyond the position that is sought and only clinching the neck of the instrument when the finger that is to be played falls into place on the string; the clinching of the thumb and the falling of the finger should occur simultaneously. The finger last used should remain in position during the preparatory movement of the thumb. In the upward shifting, the tone connection is accomplished by the finger last used moving up on the string until the hand is in the new position when the finger to be used is placed on the string.

In shifting, use at all times the finger that has been played and not the one to be played, to bring about the connection. If this rule is adhered to the student will do the shifting with the hand and always be in position before the actual playing is done. This correct way of passing from one position to another will not fail to bring about a clean technic and a fearlessness which will stand in good stead when technical problems of great difficulty are encountered.

LESSON V.

Staccato Forms and Arm Relaxation.

The student should review Lesson II., First Attempts at Bowing. The main object of this review lesson is to show the true principles of the real martelé, with the whole bow, and then the hand stroke, and only after this has been thoroughly applied can staccato be studied.

There are two principles which govern the use of the staccato stroke: the martelé idea (pressure, stroke and relaxation), and the onward movement of the arm. The pressure and stroke are practically simultaneous and the relaxation but an instant later, and are accomplished with the hand and without the assistance of the arm. After this stroke, done solely by hand, the arm moves up in preparation for the next stroke. In this onward movement of the arm and, therefore, in the ability to repeat the whole stroke, lies the success of the staccato.

Academic and Brilliant Staccato.— The Spohr, or academic staccato, is nothing more than a correct repetition of independent martelé strokes in one bow. It is a controlled staccato performed in a similar manner on both up and down bow. The brilliant staccato is more often a gift than an acquisition and is a nervous form, almost a flying staccato.

In the brilliant staccato, any position that produces the results is permissible. The Spohr staccato is not, by any means, the brilliant staccato in elementary form, but the persistent practise of the legitimate martelé hand stroke will make the brilliant staccato not only possible but more distinct, or articulate. The latter, in its most brilliant and perfect form, is largely the result of technical dash and will-power, as are all bravura forms of technic.

Staccato and String-crossing.— If the strings are not crossed properly, a correct staccato cannot be produced. A failure to produce staccato in a passage containing string-

crossings is because two things are being attempted at the same time and are not being done consecutively. The crossing must precede the staccato.

Continuity.— The left hand also is important in staccato. If the continuity of notes suffers the evenness of the bowing is interrupted.

Flying Staccato.— The flying staccato is done by a lifting of the bow after each note, the lifting being done by the hand and fingers and not by the arm. There are, however, many forms of this bowing which must be done solely by the arm to make them effective. The student must use either form according to the demand made by the passage being performed.

The secret of a good staccato is the combination of the correct martelé stroke with a free full arm stroke. The impossibility of doing staccato, which many violin students as well as mature players complain of, is entirely the fault of an incorrect understanding of the martelé idea. The attack of the martelé by the hand and arm in a stiff or locked position absolutely prevents the freedom necessary to a reliable staccato. The first note of the staccato figure or passage is begun solely by the hand, which is followed by the onward movement of the arm while the hand firmly keeps the bow in its place on the string. This onward movement of the arm permits the performance of the next martelé (staccato) stroke of the bow. These movements of the hand and arm must not come together, as otherwise the faculty of continuing the clear articulation of each note is disturbed or entirely stopped.

LESSON VI.

Legato and the Crossing of the Strings.

Legato is the exact opposite of staccato (martelé). Real legato is a continuous sustaining of the tone by means of imperceptible bow changes. Each bow stop must be mini-

mized in order that the room for the break or accent in the tone may be as slight as possible. With the stopping of the arm the hand continues the stroke, the connection being made by a purely lateral movement, (if on the same string), or an elliptical or crossing movement, if on two or more strings.

There is, if no pressure be applied to the bow, naturally less tone at the point than at the nut. The weight of the bow and the arm and the nearness of the hand and pressure to the point of bow and string contact make it easy to obtain a big tone at the nut, but the loss of weight and the remoteness of the point of pressure from the point of string contact, as the upper end of the bow is approached, make it evident that if the tone is to be the same it will be necessary to add considerable pressure as the point is approached and remove it when the bow moves in the opposite direction. This pressure, both at frog and point, should be maintained throughout the wrist movement in order that the tone quality be the same during the entire duration of the note including the change of bow. The tendency, in the young student, is to let go of the tone, especially at the point of the bow. This should be corrected. The arm movement should be evenly distributed at all times, length of stroke depending on the length of note, its importance in the phrase and the time alloted to it.

Legato in the Upper Bow.— Rapid passage work in single détaché strokes depends on the ability to do good legato work with the hand only, especially in the upper third of the bow, the middle being reserved for spiccato. The lower arm is usually not well enough developed with the consequences that the spiccato portion of the bow is invaded by passages which should be played elsewhere, either at the point or the frog. Legato should be possible in short strokes at these points of the bow and exercises should be practised to thoroughly equalize the bow technic.

Variations of Legato.— 1. The interrupted legato is a form of bowing consisting of alternate pressure and relaxation on the part of the fingers of the bow hand, the stroke continuing, the bow not leaving the string.

2. The playing of two or more notes on the same stroke (either up or down), with intervening pause during which more or less bow has been used. The taking of the bow off the string, continuing over the string and resuming after the pause, requires care, especially in the resumption of tone which is accomplished by immediately relaxing the hand on the bow as soon as the latter touches the string.

3. Two articulated up-strokes repeated over the same place in the bow and connected by an inarticulate down-stroke. The bow should be kept on the string for the connecting down-stroke, but there should be no pressure applied to this stroke while it is being executed as it is simply preparatory to the second up-stroke. This connecting down-stroke should be rapid, without pressure and not articulate.

Crossing of Strings.— The last note before the crossing to another string, when the legato bow is being used, is usually made too short because the player has difficulty in making the connection of the different bow levels. The mistake is the using of the arm and hand simultaneously. For example, in crossing from a lower to a higher string, meaning from a higher to a lower level, the arm seeks the level of the next string while the hand is still continuing the playing of the note on the last level. The hand then drops to the level taken by the arm. In the reverse exactly the opposite holds good. In crossing the strings, the new stroke must not be begun until the hand is in its normal position if the new level is to be adhered to.

The ability to cross, at one leap, three or four strings downward, i. e., toward the E string, lies in the power to so perfectly relax the arm that it will drop from its own weight, and not because of exertion. This dropping of the

arm must, of course, be combined with a string crossing movement of the hand. Though perfect relaxation must exist in the downward crossing of the strings, i. e., toward the E string, the upward crossing movement of the arm is really nothing more than the raising of the arm to the desired level, the wrist somewhat anticipating the arm in this; but wrist, hand and arm quickly establish normal positions when the level is reached.

The hand should always be held in such a position (a normal position), that three strings will be under direct reach without calling the arm into use. This necessitates transitory positions of the hand above and below normal level, which are not recognized enough as such, the one above generally being neglected altogether. Only when these vertical or elliptical hand-strokes are faithfully and carefully carried out can the crossing of the strings and the legato become satisfactory and the general playing thereby simplified. For, as long as the right arm is constantly brought into play by the smallest crossing movement, so long will the control of the arm be imperfect and the movement awkward and inadequate. There is nothing the player feels more acutely than this awkwardness brought about by undeveloped right arm and hand technic, and yet it is the most usual technical shortcoming.

It is well to point out in conclusion, that although numerous delicate bowings (hand extension, lateral and elliptical movements connected with string crossings, all going on from central and normal hand position), are constantly used to further simplify bow technic, attention cannot be too much directed to the so-called normal hand position, a pivotal one, with its accompanying freedom in manipulation, which not only permits the carrying out of the free full arm stroke and the above cited important conjunctive bowings in legato, but which at once places the player in position to become master of all those dynamic shadings which distinguish him from the unskilled player.

LESSON VII.

The Spiccato and Kindred Forms.

In the staccato and martelé strokes the bow is held on the string, biting firmly into it in order that the sudden sharp accent characteristic of these bowings may be produced. In the spiccato the bow is not held to the string but hovers over it, striking or brushing the string during the progress of the stroke. When a crisp and forceful spiccato is desired, a shorter stroke should be used, the hand position becoming a little more rigid and occasionally permitting some arm movement to reinforce the tone. In both cases, the starting and ending of the stroke is above the string. The arm must be held in a fixed position, the motion being done by the wrist and hand alone with an almost lateral motion. The natural resiliency of the bow must be depended upon to produce, in a partial sense, the rebound.

Development of the Spiccato.— Hold the bow above the string only as far as it will allow the bow to touch the string without dipping the hand, using only a lateral movement of the wrist. The dropping of the bow to the string level is largely produced by a movement of the fingers which are the supporting force. The arm must remain firmly in position excepting when the passage being played requires a crossing of the strings, i. e., more than one string. This crossing is done in various ways, in some instances forming exceptions to the rules as laid down for legato. In crossing from one string to the next, use the hand only and no arm, but in some of the arpeggio and ricochet forms the arm and hand cross as a unit, the wrist movement occurring only at the end of the triplet or quadruplet figure of bowing.

The life of the spiccato is in its continuity, its lack of effort. The martelé and staccato forms of bowing belong to the interrupted forms, those in which the progress of the bow on the string is wilfully or systematically interrupted by certain means, while the spiccato and legato forms of

bowing belong to the uninterrupted or continuous forms in which it is the aim to eliminate all obstacles which tend to mar fluency. While each note or tone in the spiccato is a unit as far as sound goes, the spiccato as a whole is really the result of continuous legato wrist or hand movement. In this way the spiccato becomes an allied form of bowing to the legato and is not a series of single detached strokes. The player, for this reason, must think of the entire spiccato passage and not of the single note.

Where Played.— There is, in each bow, one definite place where the spiccato is most easily played. The place, and the accompanying characteristic features, of course vary with each stick, according to its quality. The player will know that he has found the right place and method when the tone produced is effortless, spontaneous and free.

Spiccato often sounds glassy, without body of tone, for the reason that there is too much tenseness (resistance) in the hand, this tenseness not permitting the bow to rest on the string long enough while the stroke is in progress. As long as this condition of the hand is in evidence, so long will the spiccato be uncontrolled, spasmodic and unsatisfactory. Only when the hand is absolutely at rest (as in the case of the right hand in staccato and the left hand in the trill), and is not trying to accomplish diametrically opposite ideas, can the continuity of the spiccato, as well as its tonal effectiveness, be absolutely relied upon.

Double Spiccato.— Passages are frequently met with in which two or more notes are to be played spiccato in the same bow on the same string. This is practically the same form as the spiccato arpeggio but without the crossing of the strings. These tones should be played in about the same amount of bow as was previously allotted to one tone, the first receiving its impulse from the wrist and the others from the natural rebound of the bow. No effort should be made to make the tones after the first one has been produced.

Spiccato Arpeggios.— The arpeggio on three or four strings is but a duplication of what has been done on one string, excepting that in crossing the strings the wrist movement is eliminated with the exception of the last and first tones of each arpeggio. This simply means that the regular wrist or hand extension movement between the last tone of one arpeggio and the first tone of the following one is used for the purpose of giving the bow its start, its impulse, and for making the initial accent. The extension movement is really done off the string, as in the single spiccato tone production. No wrist movement should be used in crossing the strings, the crossing being done entirely by the lowering and raising of the arm which maintains its position with reference to the wrist. The faster the arpeggio the shorter the amount of bow to be used, and the less the effort on the part of the arm required in its production.

Spiccato in the lower half of the bow is produced in the same way as before described with the aid of the arm to reinforce the tone.

Thrown Spiccato.— Thrown spiccato, ricochet, is produced, up or down bow, with as many tones as may be desired, by starting as in simple spiccato and allowing the rebound of the bow to produce the remaining tones. The force of the first stroke is governed by the number of notes to be played. The stroke, in its entirety, is not controlled by the wrist.

LESSON VIII.

The Trill and the Vibrato.

The trill and the vibrato can be acquired, to a certain extent, by systematic practise according to rule, but the finely finished artistic product is more largely a gift, an instinct, whether mental or muscular it is difficult to say. Although these two forms have much in common, yet in the final results they are totally different, the trill depend-

ing absolutely on relaxation, quietness of hand, and the vibrato on a combination of relaxation and tenseness.

The average player tries to put intensity into every tone, that is, to use the vibrato to an excess, and finds, when a trill is required, that his hand is too stiff because he is trying to do two things, diametrically opposed, at the same time. The vibrato is used too much and should be employed only in sustained emotional climaxes, with some exceptions, and in certain important places in passage work. The correct use of vibrato is a matter of taste; it should not be a constant accompaniment of violin playing but should be intelligently employed when demanded by the musical sense.

The Trill.— The trill depends on a correct adjustment and relaxation of the hand and the even stopping of the string. This relaxation in the hand, the ability to combine freedom of motion with power of finger stroke, is similar to the ability, on the part of the right hand, to apply pressure and yet to make use of hand extension. In the trill, the freedom of the thumb is of the utmost importance, for, if it grips the neck too firmly it is apt to produce tenseness of the hand. Practise the trill slowly, holding down all of the fingers below the finger in use; that is, if the third is performing the trill hold down the first and second. Drop the fingers firmly but not from too great a distance above the string and hold the note long enough to produce a clear tone, giving each note of the trill the same value. If the thumb and hand are free there will be no fatigue, and if such occurs, it is well to look for stiffness. It is good practise to keep the thumb moving along the neck of the violin while the trill is being practised, not in the same rhythm with the trill, but absolutely independent, in order that there may be no direct connection in the movement. This will produce relaxation in the hand.

The principles that facilitate a good trill hold good for the double trill. In some cases new difficulties present themselves, these being unevenly developed strength of fingers

and the natural varying of finger lengths. The first can be overcome by bringing the weak fingers (the third and fourth) up to the efficiency of the other two; the second, by adjustment of the hand.

The Vibrato.— The pupil, in first trying the vibrato, will endeavor to use the whole arm and this should be avoided by relegating the vibrato entirely to the hand, at least until the pupil has acquired control over the arm. To acquire the vibrato, take each finger in the first position, or in the second or third as desired, and practise a slow exaggerated form of vibrato, making the amplitude of the movement as small as possible in order that the pitch of the note may not be altered too much. Begin this practise slowly and gradually increase the speed, taking care to see that the movement be kept even. The foundation of the whole form is a correct use of the hand independently. After the hand is freed and made independent the vibrato may make use of the entire arm, since it is impossible to get the best vibrato without doing so. This use is, however, reflex, the vibrato not being a product of the arm vibration but of hand vibration. The arm merely supplements the hand.

LESSON IX.

Scales and the Limits of the Fingerboard.

So far, scales have been treated of only within the limits of the first, second and third positions, but according to an old arrangement, the violin possesses seven positions to which modern composers have added many notes above, all of which it is necessary to consider since these greatly extended limits are, at the present time, as necessary to us as the first three positions were to the old writers.

The correct playing of scales extending through the various positions depends on two things: a correct knowledge of shifting and methodical fingering. In connection with the shifting, it is necessary to mention that the hand,

in the higher positions, retains the same form and position as in the first three, only the thumb requiring different treatment.

We have shown how the hand and thumb are shifted to the third, and possibly the fourth positions, as a unit, but it is necessary now, in order not to be hampered by the body of the instrument, to make a preparatory movement or transitory position of the thumb and an accompanying freeing of the hand from the neck of the violin, to permit the hand an unlimited upward movement. Just as in the first three positions, the hand and thumb retain their relative positions after fully established. In the downward movement of the hand and thumb the thumb precedes the hand as in the first three positions.

Glissando.— In the glissando, the downward motion of the hand should be steady and continuous, the thumb furnishing the motive power. At the beginning of the glissando the extension of the thumb is such as to allow the contracting of thumb and hand to cover the tones of several positions. When this distance has been fully covered the thumb again extends downward and the contraction is repeated. As few of these extensions as possible should be made and no break should occur in the continuity of the glissando as the thumb reaches down.

Fingering.— Scales can be played in many different varieties of tempo for different uses, and the bowing and scope of the scale must be determined by the result desired. The best books for daily practise are Schradieck's Scale and Chord Studies, including arpeggios, which are usually not given sufficient attention. The fingering of scales is determined by individual taste and idiosyncrasies.

Fingering should be largely a matter of the repetition of motives. In any passage of any length it will be found that certain forms of fingering can be repeated again and again. This is to be preferred to constantly changing fingerings as it simplifies the passage and makes the player freer

to think of the content. This system of fingering by motive is often the only difference between a good reader at sight and a bad one. Scales should be practised regularly, every part of the fingerboard should be used, and the fingering should be systematized.

Scales should be practised in all forms. It should be the regular study of the violinist to start each scale, not only on the key-note but each succeeding note of the scale, in order that, though habit or the position on the fingerboard may prompt another tonality, his intelligence and ear will enable him to play the required scale. For example, the D major scale may be played beginning on E or F-sharp, etc. Each scale should be played beginning in every position and with every fingering, because scale passages, especially in modern works, seldom conform to simple scale models.

LESSON X.

Chords and Double-stopping.

Chords.— The playing of chords is very often a bone of contention between the player and the instrument, partly due to a misinterpretation of the musical mission of chords, partly to misapplied bow technic. In the majority of cases the chord of three and four notes represents the same number of equally important voices which must be sounded simultaneously. This can best be accomplished by pressing down the outer strings to the inner, and only when the bow bites into or holds down all strings at once can a correctly played chord be produced.

This cannot be accomplished, at least as well, with the bow tilted in the usual manner,— away from the bridge,— but it will be necessary to temporarily adopt a transitory position of hand which will permit playing with the hair flat against the strings. It is recommended to tilt the hand somewhat backward, the wrist a trifle in, i. e., below the normal level, this position permitting of more direct pres-

sure on the strings. This position must, of course, be regarded as purely transitory and the effect it might have on the freedom of the arm stroke must be immediately counteracted by applying those principles of the return down-stroke as explained in Exercise 2, Lesson II.

Of course, this mode of playing chords applies only to those of distinctly harmonic character, when the voices are of equal importance, and when tonal volume is required. A different method is necessary when, in a piano or mezzo forte phrase, one of the voices of the chord is melodically important and must be especially brought out. Then, a "breaking" of the chord is not only permissible but essentially correct, and this again can only be accomplished with the bow in the normal position, the hair on the edge, not flat.

Double Stopping.—If finger preparation, placing fingers and gauging interval positions of the fingerboard, plays an important role in general technic, or single stopping, then assuredly in double-stopping double attention should be given this mental process of gauging results before the application of the fingers to the strings.

If the student has been careless in his intonation, it will quickly manifest itself when he takes up the study of double-stopping. Not that a different hand position or more difficult intervals make this so, but simply for the reason that the sounding of two tones simultaneously makes any deviation in pitch at once more obvious to the ear. The student will, therefore, do well to carefully re-study his hand position and to systematically acquaint himself with those double-stop positions which are most common, or rather, which form the basis of those interval combinations most commonly used.

It has always seemed ill-advised to lay so much stress on the study of thirds, octaves and tenths, at the expense of the other intervals. Especially should the importance of fifths as a basic feature of interval study be fully recognized.

Further, the relationship (only as far as finger position is concerned) of the intervals of the fourth and sixth, third and seventh, and second and octave, will, in a way, simplify rapid finger adjustment. In addition to the fundamental requisites in the acquisition of good double-stopping, viz., correct hand-position, equalization of strength of fingers, close attention to intonation through careful and systematic study of intervals, it will be necessary to pay double attention to the left thumb and shifting, guarding carefully against the tendency of the thumb to clinch the neck too tightly.

Octaves and Tenths.—Though each finger may be regarded as a unit in the playing of octaves, it is wise to think of the first as the responsible factor, or base of the octave. The fourth is to be kept in touch with the first by the second and third fingers being utilized to partially fill in the space between, though they are not necessarily to be kept on the string.

Fingered octaves are played with the first and third and the second and fourth fingers alternating and must be regarded as a highly specialized form of technic. While useful in passages requiring great facility, or speed, it has been found that prolonged practise of them is apt to produce faulty intonation in general playing.

Tenths and unisons must also be considered more or less of a technical *tour de force*, and if the player's hand should not be of a dimension that makes the stretch comparatively easy it is advisable to abandon their mastery, as the hand is in an abnormal position and persistent effort must bring about muscular disorders which are sometimes difficult to cure. In the overcoming of all technical feats requiring unusual strain or effort, commonsense must be the guide.

Broken Chords.—The broken chord is in all its essentials the same as the chord as treated above, a grouping of certain notes according to harmonic and technical

rules, with the exception that the chord is only playable on the instrument in one position at a time, while a broken chord is a succession of the intervals forming the chord, through various positions. The principal broken chords used in violin technic are those founded upon the common triad, the dominant and the diminished seventh chords. The latter is a favorite factor in the writings of a certain school, and when occurring in one particular open position, a-flat below the staff, f in the first space, d on the fourth line and b in the second space above the staff, can be repeated *ad infinitum* into the upper positions, retaining the hand position assumed when the chord is first attacked, the fingers adjusting themselves only to the shorter intervals of the upper fingerboard as the hand moves upward.

LESSON XI.

Exceptional Tonal Effects.

It was shown in an early lesson, that mere beginners could be made observant of the range of tonal possibilities by the way in which they were brought to play the open strings. The ability to produce a tone of some degree of warmth to an open string without the aid of the vibrato must necessarily imply a highly developed use of the bow arm. The various degrees of expression which are made possible by a cultivated right arm technic, complement those which are due to distinct methods of finger application: perfect intonation, with resultant sympathetic vibrations of strings; pressure (vibrato), and other modes of left hand technic which have distinct bearing on tone, intensity and expression.

That there are other means of producing tonal effects of an exceptional nature, the following unusual varieties give evidence:

The Mute.— Perhaps the most common means of changing the usual tone of the instrument is that obtained

by fastening or fitting a small clasp or device called a mute (sordino) on the bridge of the violin, which results in deadening, to some extent, the vibrations and changing the tone. The mute may be made of wood, bone or metal, those made of ebony being preferred as they do not so completely muffle the tone so that all vibration is destroyed. The tonal effectiveness of this device is so well known that there is hardly need to dwell upon it. Bewitching and soothing at the same time, it quickly loses its charm when its use is over-indulged in.

Sulla Tastiera.— This term of expression is used to indicate that instead of playing with the bow in its usual place, half way between the fingerboard and the bridge, the playing is to be done directly over the fingerboard. This results in the tone becoming less clear and brilliant, partaking of a subdued, dolce and flute-like character.

Ponticello.— This implies playing with the bow as near the bridge as possible. The effect is uncanny, very restless and the tone quality is of a hard, glassy unresponsive nature (as far as the vibration of the string is concerned).

The Tremolo.— This, in a measure, reproduces the same restless effect as the ponticello, probably owing to the shortness of the stroke preventing the string from giving full and free vibration. Very little bow is to be used, the motion to be produced by the wrist without any use of the arm.

Col Legno.— This bizarre bowing is met with almost exclusively in orchestral works. The stick of the bow is slapped against the strings, producing a grotesque effect.

Pizzicato.— This is picking or plucking the strings with the fingers of either hand. It is most commonly played by the first finger of the right hand, the thumb resting against the end of the fingerboard. The second finger, however, is also employed, some players using both alternately. In rapid passages this mode is certainly to be recommended.

The left hand pizzicato is done by vehemently pulling back the fingers just used and in that way sounding the next note below. This applies to the passages as found in Paganini and other writers of bravura technic for the left hand. When single notes only are played, either the third or fourth finger is employed for the pizzicato, the first or second stopping the note.

The quality of the tone of the right hand pizzicato can be modified to a certain extent by either plucking directly upward, causing a hard short, incisive tone, or by a side or horizontal pulling of the string, permitting of longer vibration and, in consequence, effecting a somewhat longer and more agreeable tone. In playing chords the same rules hold good as with chords played with the bow. When the musical character is a decided one simultaneous plucking of all strings is desired when a harp-like effect is wanted, i. e., a broken chord like result with little tone is aimed at, then a sweeping over the strings, with the fingers almost flat against the strings is advised.

Harmonics.— These may be classified as either natural or artificial. The former can be produced only at those points of the string where the natural overtones of the tonic tone of each string occur. Any finger placed lightly at such a place on the string, so lightly that the string can vibrate below and above, will produce a natural harmonic. Artificial harmonics are formed by placing (generally) the first finger firmly on the string, forming a new base, and resting the fourth finger (usually at the interval of a fourth above) lightly as before. The harmonic resulting from this application sounds the note of the double octave of the bass. When the interval of the fifth is used the harmonic sounds the octave above the fifth, the octave of the note lightly played by the fourth finger.

In harmonics, one great essential is perfect intonation. Harmonics cannot speak clearly or quickly when the intonation is the least inexact. The natural harmonics are, of

necessity, limited to the overtones of each open string. Artificial harmonics can be produced *ad libitum,* even to the extent of double harmonics and trills in harmonics.

Vibrato applied in the playing of the artificial harmonic lends added intensity to the tone. A less common use of the vibrato is its employment in giving warmth or adding intensity to the tones of the open string (when certain tones must, of necessity, be played on an open string, say the G) by vibrating on the octave above or on the unison on the next string. This brings about a sympathetic vibration of the open string and in this way brings about the required result.

LESSON XII.

Character and Tempo, Expression and Rhythm.

Character and tempo are closely bound together, the one being determined by the other. A phrase that is intended to be played martelé becomes meaningless when it is hurried to such an extent that the martelé bowing cannot be carried out, détaché or legato being substituted. For the same reason, a passage effective only when played spiccato in animated tempo, loses this effectiveness entirely when the character of the subject is misjudged and a wrong tempo applied. The teacher cannot too early call attention to this differentiation in character, the ability to determine by melodic phrase, figure or passage, or rhythmic motive the true character and meaning of a composition. Sometimes a figure or passage, the broad lines of the melodic phrase, or a rhythmic motive alone may be sufficient to indicate the proper reading, and the player immediately reveals his artistic judgment by only applying such bowings as fully bring out the character unmistakably. This ability, aside from the musical sense, depends entirely on the right arm technic of the player and it is with this end in view that the bowing exercises in Lesson II. have been recommended.

Hans von Bülow once said: "In the beginning there was rhythm." This is undoubtedly true since historical investigation has proven to us that rhythm existed long before melody and harmony developed. Perhaps the most elemental form of rhythm is the pulsation of the heart, or to be more exact, life itself is pulsation or rhythmic expression. Viewing it from this standpoint, it is easy to follow the development of rhythmic impulse through the various phases of elemental expression such as the beat of the drum, the dance, etc., until we find its highest expression in the modern symphonic work.

It is a peculiarfact, but nevertheless true, that the young student is indifferent in his attitude toward rhythm; i. e., his rhythm is undefined, not sharp nor pulsating, and only gradually, in fact only after years of musical development does this finer perception of rhythm take hold of him. Until this stage of his development is reached his playing lacks the vital and convincing note.

It will be seen from the foregoing, that the observing of certain rules with regard to technic will greatly facilitate the reproduction of the character and rhythmic incisiveness of the musical phrase. What is commonly called expression, the ability on the part of the player to perform with "feeling" depends in a great measure on the human and musical qualities of the individual player, but given fine qualities of mind and heart, the fact remains that only well defined and technically correct modes of expression can adequately portray or reproduce these inward promptings of heart and mind.

FRANZ KNEISEL

Violinist

Born at Bucharest, Rumania, in 1865. His father, a military band leader, was his first teacher; graduated from Bucharest Conservatory, with first prize for violin, when he was fifteen. Won first prize for violin at Vienna Conservatory in 1882; became solo violinist of Boston Symphony Orchestra in 1885, holding this position for eighteen years. Founded the Kneisel Quartet in 1886; now violin instructor in the Institute of Musical Art, New York.

SOME REMARKS ON QUARTET PLAYING

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SOME REMARKS ON QUARTET PLAYING

Franz Kneisel.

During the many years that I have been giving chamber music concerts, I have been asked a multitude of questions, —by professional and non-professional musicians, relating to the violin and its music, to the art of quartet playing in general, the literature of chamber music, the various editions of the classics, the material for study and public performances, programs, etc.

I have frequently answered such questions when they came to me by word of mouth; but I have generally hesitated to reply to written inquiries, fearing that in the absence of a detailed discussion, my remarks might be misinterpreted.

One of the most frequent questions is in regard to the necessary qualifications for a group of players intending to form a string quartet with the purpose of giving public performances.

Every musician who aims at becoming a member of a string quartet should first have acquired a thorough and solid technic of his instrument, reaching even to a point of virtuos-

ity (this is especially true of the first violinist), though mere virtuosity should never be a conspicuous feature of the good quartet player.

The love for chamber music has usually been awakened early in the life of a quartet player. As a student he will probably have sought the instruction of teachers, who while encouraging fine technical skill will also have guided and developed his taste for the best in the literature of music.

While a thoroughly developed left hand is indispensable for a quartet player, the art of bowing is perhaps of even greater importance, for the flexibility of each member of the quartet in adapting his playing to the others, so that unity of expression may result, is actually dependent on his skill in the use of the bow.

Quartet players should start out with the determination to prepare each work offered for public performance so that every bar shall be perfectly clear and transparent. Only by making it possible for the listeners "to follow the thread of the story" can the complete attention of an audience be gained and held. Distinctness in the presentation of the themes should be the aim at rehearsals, under all circumstances, and only when this has been attained can the phrasing, the nuances in the polyphonic structure and the conception of the work as a whole be approached.

It is needless to say that euphony, i. e., beauty of tone, is a vital factor, and while this can be acquired by careful and thoughtful treatment of the four parts, the instruments themselves must necessarily be of superior quality, in order that the players may obtain tonal varieties of a high order. It is natural that the instrument of the first player should possess more brilliancy than that of the second and that the latter should be just a shade darker in color. The viola ought to be one of large size and somber in quality. A special effort should be made to obtain a viola with good G and C strings. It must be remembered that the viola is only a fifth lower than the violin, whereas the 'cello is a full octave lower than

the viola, thus the lower strings of the viola effect a smooth connection between the violins and the 'cello, which is of prime importance in scales and similar passages. A passage which begins in the high register of the first violin, and is then taken up by the second, should be led down to the depths of the 'cello, through the intermediate regions of the viola, without any noticeable break.

In order that the work at rehearsals may be intelligent and productive of the best results, it is necessary that each player acquaint himself with the composition, not only by looking over his own part but also by studying the score. A performance cannot become plastic and transparent unless every player has gained an intelligent insight into the work as a whole, and this can only be obtained from the score.

To the first violin, the leader of the quartet, naturally falls the task of directing the rehearsals. His ideas must be carried out in order to obtain good results, as differences of opinion on any point can never give a satisfactory performance. A little tact and diplomacy will obviate many a difficulty arising in the course of a rehearsal. It is not well to rehearse a difficult work for too long a time without interruption. It is far better to interpose a simpler or more familiar work and then return to the difficult composition when the mind has regained freshness and elasticity.

The leader should, of course, be thoroughly familiar with the work to be played before the quartet meets for the first rehearsal; and should have formed his ideas about the tempos, and all other vital matters of interpretation, beforehand.

Perhaps the most important question to be determined is the tempo. The usual tempo marks, such as allegro, andante, adagio, must not be taken too rigidly, but occasionally modified according to the character of the composition. Thus the first movement of Beethoven's G-major Quartet, op. 18, No. 2 is marked simply allegro; yet the graceful char-

acter of the movement at once shows that a slower allegro is intended than in some other allegro movements, for instance, the allegro in the second movement of the same quartet. Often the qualifying expressions which accompany the principal tempo designation are of greater importance than the designation itself. I found a particularly interesting example of this when I first produced Brahms' Clarinet Quintet. The second movement contains a middle part marked "presto ma con sentimento." At first sight this was extremely puzzling and seemingly contradictory, for when played as a real presto, it was impossible to obtain the "sentimento" in the music. If, on the other hand, the qualifying term be emphasized the real presto character is lost. I, therefore, took the liberty of modifying the presto a little in order to bring out the expressive character of the movement.

The next summer vacation I spent in Ischl, Austria, where I frequently met Brahms. One day while dining together, in the company of Nikisch, Steinbach and Muhlfeld (the famous clarinet player who was the first to play the above quintet, and who helped introduce it in all the principal cities of Germany) Brahms suggested that we play the composition for him. The proposal was readily and gladly accepted as may be imagined. While going to my home the *presto ma con sentimento* movement was uppermost in my mind. I naturally did not like to ask Brahms about the tempo, and yet it would have been awkward for the first violin, which begins with the theme, to take another tempo than that of the composer, in the presence of the composer himself. Imagine my relief, when just before entering my home, Muhlfeld said to me, 'You know, the master does not wish the *presto ma con sentimento* played too fast."

The leader is not only responsible for the quality of the performance, but he should also exercise great care in the arrangement of the program.

As to the selection of material for early study and preparation for a public career, it is not an easy matter to give advice that will fit every case.

Quartets by Haydn, Mozart and the early Beethoven are certainly to be recommended, though it must be understood that the demands made upon the first violin are of the highest order in some of these quartets. In most of the above works the first violin bears almost the entire burden, although the second violin, the viola and the 'cello occasionally also receives passages of dominant importance. In Beethoven's later works in which the polyphonic structure reaches its highest development, the demands made upon every player are naturally greater.

Every reader of these words must occasionally have wondered why certain concerts were lacking in effectiveness, even though the works performed were of the best, and the performance in every respect admirable. I would offer as an explanation that the arrangement of the program itself was probably at fault. The program question should, therefore, be most carefully studied by the leader. The keys of each work should be considered, the different movements carefully compared. Compositions in which the various movements contain striking resemblances, rhythmic, harmonic, or as to their general character, should not be placed on the same program. Two long adagios or two minuets should not be heard at the same concert. Variety and contrasts (though not too harsh ones) are necessary elements of a good program.

One modern composer should be included on a program, that contains two classic works. If no modern work is available an example of the romantic school will prevent possible monotony. Of course, there are great possibilities in making a strictly classical program, as many a combination of Haydn, Mozart and Beethoven, particularly when well selected will testify. The most serious work is better placed first or second than last on a program that contains three

quartets. It is a good plan to place one of the last quartets of Beethoven in the middle, and end the concert with a quartet by Haydn. In this case the opening number can be a modern work or a composition of the romantic school.

One-composer programs are rarely successful affairs. To my mind only Beethoven offers that splendid variety which enables us to select an entire program from his compositions.

ARNOLD DOLMETSCH

Archæologist of Music

Born in LeMans, France, in 1858. While a boy, became familiar with piano manufacture in his father's factory, and has devoted his life to the repair and reproduction of old instruments and to the perpetuating of old music. Well called an apostle of old music.

THE ART OF MUSIC BEFORE 1750

IN FOUR SECTIONS.

ARNOLD DOLMETSCH.

ANALYSIS OF SECTIONS

Introduction.
Section I.— The Lute.
Section II.— The Viols.
Section III.— The Clavichord.
Section IV.— Virginals, Harpsichords and Spinets.

THE ART OF MUSIC BEFORE 1750

Arnold Dolmetsch.

INTRODUCTION.

Most musicians believe that "Music is the youngest of the arts"; they use no earlier music than Bach or Handel's. Haydn and Mozart, who flourished during the American Revolution, are considered "ancient." Yet, from the earlier dynasties of Egyptian kings, through ancient Greece, the Roman Empire, Mediæval Europe, the Renaissance, the Sixteenth and Seventeenth Centuries, gifted men devoted their life to music, and their contemporaries esteemed and enjoyed their works as much as those of the architects, poets, painters and other artists of the time.

How is it then, that whilst we know and appreciate the literature, architecture and painting of past ages, we should be so ignorant of the old music?

Does the music of today contain the accumulated beauties of former ages any more than the other arts? There is no reason to believe it. Progress in the arts does not resemble the onward march of science where the discoveries of one generation serve as the starting point for the following. There is no more science in music than in literature. Even in the construction of musical instruments the science of acoustics has not been able to help with a single practical discovery.

But, it may be said, the history of music is taught in our colleges and universities; students pass examinations and graduate in it. So it is; but they learn little about the earlier forms of the art besides names and dates; they have practically no chance to get acquainted with the music. Few of the teachers have ever heard any. They speak about it, quoting the opinions of "authorities" who have studied the subject as much as they thought necessary to write a text-book, but far too superficially to get any real knowledge. Only a small amount of old music is at all accessible outside of European museums, and that mostly in corrupt editions. The instruments for which that music was made, and without which it cannot be realized, are only just beginning to be understood and studied practically. Thus it is that the largest part of the Art of Music still remains a closed book to musicians.

I have been investigating this subject for twenty years. I have not gone far, for it is a vast undertaking, but I have seen enough to convince myself that the study of the old music is a most pressing need. It will bring to light works of art of unsurpassed beauty; it will help us to understand the music of the present, and establish the only safe foundation for future developments of the art.

The following instruments would be required: two lutes; a complete "chest of viols," composed of two trebles, two tenors and two basses; a violone; one or two viole d'Amore; a clavichord; a harpsichord with two keyboards and a full complement of stops. No doubt, wind instruments would also be wanted, but the above would be sufficient to begin with. The study of these instruments is fascinating. Gifted students could easily be induced to play upon them, and there is no doubt that the subject, once started, would quickly develop and give valuable results.

One of the chief difficulties in the way of a Musical Renaissance is now removed. It was almost impossible formerly to get an old instrument in really good order.

Piano-makers knew nothing about harpsichords and clavichords; violin-makers were just as ignorant about lutes and viols.

Intending players were unable to direct the restoration of their instruments, not understanding themselves their possibilities and idiosyncrasies.

Now lutes and viols, harpsichords and clavichords as beautiful and good as the old ones can be obtained as easily as violins and pianofortes.

SECTION I.

THE LUTE.

The name of the lute is very familiar. We find it in the Bible, although it merely stands there as a convenient translation for some Hebrew instrument, perhaps very unlike a lute. It often recurs in Shakespeare and the early English literature. Even modern poets use the word on account of its poetical associations, though they hardly understand what it means.

Though the name be common, the thing itself has become very rare. There are some lutes in museums: in Bologna, Brussels, Paris, and other places, and a few in private collections; but spurious "property" lutes manufactured by unscrupulous Italians for latter-day collectors, are far more numerous than genuine specimens, even in public museums.

The modern painter who wishes to introduce a lute into one of his works, a fashionable thing nowadays, has every chance of reproducing some impossible model, perhaps a complete forgery, or, worse still, some partly genuine instrument, which through the successive "restorations" and "improvements" of ignorant admirers has become completely transformed. There is such a lute in the South Kensington Museum in London: its back only is original,

the rest being an absurd hybrid compound; nevertheless it has been reproduced many times, and is even given as an illustration in one dictionary of music.

A careful examination of the lutes so frequently to be met with in old pictures would be a safer guide to the understanding of the various forms of this instrument; for the older masters well understood its beauties, and, unlike their descendants, their paintings were technically accurate. Who has not admired these exquisite angels playing the lute, sometimes a very little angel struggling with too large a lute, which form such a charming incident in early Italian pictures? The drawing of the hands, especially the left one, in the difficult positions necessitated by the performance, is so precise, that in most cases one could tell the very chord that is being played. Undoubtedly the painters were themselves lute players, otherwise they could not have made their meaning so clear.

During the Fifteenth, Sixteenth, and greater part of the Seventeenth Century, the lute was considered the best and most perfect of musical instruments; all the musicians played it. It was the foundation of instrumental music as well as the indispensable companion of vocal music. In some form or other it is as old as the art of music, that is to say as old as civilization itself. It was in use in ancient Egypt and in the East, its name being derived from the Arabic "Al'ud." It attained its greatest perfection in Western Europe between 1500 and 1650, then quickly lost its popularity, and only left with us a degenerate offspring — the mandolin.

The finest lutes were made in North Italy, principally in Venice, in the Fifteenth and Sixteenth Centuries. These instruments were prized in the halcyon days of lute playing, just as we now prize beautiful violins. In the Seventeenth Century they fetched very high prices, as the following quotation will show. It is taken from a delightful book of great interest for our subject:

"Musick's Monument; or a Remembrancer of the Best Practical Musick; Both Divine, and Civil, that has ever been known, to have been in the World.

"* * * The Second Part Treats of the Noble Lute (the Best of Instruments) now made Easie; and all Its Occult — Lock'd-up — Secrets Plainly laid Open, never before Discovered; whereby It is now become so Familiarly Easie, as Any Instrument of Worth, known in the World; * * * By Tho. Mace, one of the Clerks of Trinity Colledge, in the University of Cambridge. London ... 1676.

"First, know that an old Lute is better than a New one: Then, The Venice Lutes are commonly Good; which you shall know by the writing within, right against the knot, with the Author's Name.

"There are diversities of Men's Name in Lutes; but the Chief Name, we most esteem, is Laux Maler, ever written with Text Letters: Two of which Lutes I have seen (pittiful Old, Batter'd Crack'd Things) valued at 100 l. a piece.

"Mr. Gootiere, the Famous Lutenist in His Time, shew'd me One of Them, which the King paid 100 l. for.

"And Mr. Edw. Jones (one of Mr. Gootiere's Scholars) had the other, which He so valued; And made a Bargain with a Merchant, who desired to have It with him in His Travels, (for his Experience;) And if He lik'd It when He returned, was to give Mr. Jones 100 l. for It; But if he Refused it at the Price set, he was to return the Lute safe, and to pay 20 l. for His Experience and Use of It, for that Journey.

"I have often seen Lutes of three or four pounds price, far more Illustrious and Taking, to a common Eye."

These famous lutes had very few useless ornaments about them — inlays of mother-of-pearl and silver, ivory and ebony being detrimental to the tone. When loudness began to be the desideratum to music, and the lute, incapable of

violence, went out of fashion, the most precious instruments, not "Illustrious and taking to common Eye," had least chances of being preserved, hence their extreme rarity.

The decorative lutes one finds in museums were made for collectors rather than players. There were collections of musical instruments as far back as the Fifteenth Century. Hercole Bottrigari, in his dialogue, Il Desiderio, printed in Venice in 1594, gives a tantalizing description of the very famous one kept by Alfonso II., Duke of Este, in Ferrara:

"Ha l'Altezza," says Bottrigari, "sua due gran camere honorate, dette le camere de'musici; percioche in quelle si riducono ad ogni lor volontade i musici servitori ordinariamente stipendiati di sua Altezza; iquali sono molti, & Italiani, & Oltramontani, cosi di buona voce, & di belle, & gratiose maniere nel cantare, come di somma eccellentia nel sonare, questi Cornetti, quegli Tromboni, dolzaini, piffarotti; Questi altri Viuole, Ribechini, quegli altri Lauti, Citare, Arpe, & Clavicembali; iquali strumenti sono con grandissimo ordine in quelle distinti, & appresso molti altri diversi tali useti E non usati."

Note, "usati e non usati," that is: to use and not to use. The magnificent Duke clearly had instruments to be played upon and others preserved for their beauty or curiosity only. It is remarkable that in old pictures one hardly ever sees a decorated lute; they are always "playing" instruments.

The body of the lute is built of very thin strips of cypress or other light sonorous wood, called the ribs, glued edge to edge; the joints are strengthened by slips of paper or parchment stuck over them inside.

A few slips glued across the others consolidate the frail structure. At each end a block of wood binds together the pointed ends of the ribs, the upper block, thicker than the other, giving a firm support to the neck.

The belly is a thin slab of pine wood, barely one-

twelfth of an inch thick, most carefully chosen for its close and regular grain, and free from knots or any faults. The rose or sound-hole, which provides the necessary communication between the air enclosed in the body and the atmosphere, is not merely a round opening, as in modern guitars and mandolins; it is formed of a number of small cuts in the sounding-board, so arranged as to form a pattern. These roses are always beautiful, often masterpieces of design and workmanship. Lute-makers must have had wonderful powers of invention, for it is rare to find two roses alike.

The neck of the lute is about as long as its body. It is thin for convenience in playing, and comparatively wide to accommodate the numerous strings. The head, or peg-box, is of a simple form. It joins the neck at a sharp angle, thereby reducing the total length and helping to distribute the weight more equally; for the body is extremely light in proportion to the neck and the head with all its tuning pegs.

The bridge is a narrow strip of wood firmly glued to the belly. The strings are looped to it through little holes. The tension upon the bridge is relatively enormous; it speaks well for the quality of the glue in ancient times, and the skill in using it, that these bridges do not come off more often than they do.

The strings are of catgut, graduated from an extremely thin one in the treble to a goodly thickness in the bass. They are tuned in pairs, that is, two in unison to the same note, except the treble, which is single. The number of strings varied from eleven in the Fifteenth Century to twenty-six in the Seventeenth. A lute of eleven strings would have six open notes, since the treble is single and the others are double.

The classical tuning of the lute of eleven strings was by intervals of a fourth between all the strings except the two middle ones, which stood a third apart. This gives a

stretch of two octaves between the treble and bass, the actual notes being from the bass upwards G, C, F, A, D, G. One more octave is available in the treble by the use of the fingers, making three octaves in all, or about the range of the human voice. Additional bass strings or " diapasons," tuned in a diatonic sequence, gradually extended the compass to C below the bass stave, or even lower, giving a range of three and a half octaves.

For solo playing, the tuning of the lute became altered in a great variety of ways about the Seventeenth Century; but, in accompaniments, the classical tuning given above remained unchanged.

The lute has frets, but instead of being inlaid ridges of metal or ivory, as in modern guitars or mandolins, they are pieces of catgut tied round the neck with a special knot, ensuring their firmness and yet allowing them to be shifted a little backwards and forwards as may be required. The old gut frets thus possess a great advantage over the modern inlaid ones, for they can be adjusted according to the player's ear and experience. This makes it possible to play in tune, whilst with metal frets fixed more or less inaccurately by the maker, there is no possibility of tuning the notes.

The lute is always played by the fingers, never with a plectrum. Its double strings are intended to mellow, strengthen, and add a special ring to the tone, not to produce the tremolo of the mandolin.

The following directions for playing the lute are taken from Mace's book: " * * * first, set yourself down against a Table, in as becoming a Posture, as you would chuse to do for your Best Reputation.

" Sit Upright and Straight; then take up your Lute, and lay the Body of it in your Lap-a-cross; let the lower part of It lye against your Right Thigh; the Head erected against your Left Shoulder and Ear * * *

" The 2nd thing to be gain'd is, setting down your

Little Finger upon the Belly, close under the Bridge, about the first, 2nd, 3rd, or 4th strings; for there about is its constant station.

" The 3rd thing is, Span out your Thumb, among the Basses, and lay the end of It down, upon which you please, but rather upon the Last, or Greater Bass; and when you have thus made your Span or Grasp, view your Posture in all respects.

"And now, supposing you are perfect in your Posture, proceed to the striking of the string upon which your Thumb lyeth.

"And as to the work, it is only keeping your Thumb straight, and stiff, and gently pressing down that String, so, as your Thumb may only slip Over it, and rest upon the next string, your Thumb standing ready, to do the like to That string, and so from string to string, till you have serv'd all the Basses after the same manner.

" The 4th thing is, to teach you the Use of your Fingers, and is thus done:

" First, observing still, all your former Postures carefully, with your Thumb ever resting upon some one of the Basses, put the End of your second Finger, a very little upon the Treble String, as if you did intend only to feel your String. * * * then draw up your second Finger from under the String, forcing the string with a pretty smart Twich, (yet gently too) to cause it to speak strong and Loud. * * * "

After many more curious and precise explanations, most earnestly reiterated advice about your " Postures," and directions for placing the left hand, our author has the following: "And now in This Lively, And Exact Posture, I would have your Picture drawn, which is the most becoming Posture, I can Direct unto, for a Lutenist * * *."

He then explains how one may find the notes upon the instrument, and teaches at once to play seven charming little preludes in the principal keys. No scales or mechanical exercises are given. In the happy old days one learned to

play tunes by trying to play tunes. The training of the hands proceeded naturally with the development of the musical faculty. Then he describes all the ornaments which formed such an important part of lute playing:

"I will now lay down all the other Curiosities, and Niceties, in reference to the Adorning of your Play: (for your Foundations being surely Laid, and your Building well Rear'd, you may proceed to the Beautifying, and Painting of your Fabrick) And those we call the Graces of our Play. The Names of such, which we most commonly use upon the Lute be these. The 1st, and Chiefest, is the Shake. The 2nd, the Beate. The 3rd, the Back-fall. The 4th, the Half-fall. The 5th, Whole-fall. The 6th, the Elevation. The 7th, the Single Relish. The 8th, the Double-Relish. The 9th, the Slur. The 10th, the Slide. The 11th, the Springer. The 12th, the Sting. The 13th, the Tutt. The 14th, the Pause. The 15th, and last, Soft and Loud Play, which is as Great and Good a Grace, as any other, whatever * * *

"Some there are, (and many I have met with) who have such a Natural Agility (in there nerves) and Aptitude, to That Performance, that before they could do anything else to purpose, they would make a Shake, Rarely well, and some again, can scarcely ever Gain a Good Shake, by reason of the unaptness of their Nerves, to that Action; but yet other wise come to play very well.

"I, for my own part, have had occasion to break, both my arms; by reason of which, I cannot make the Nerve-Shake well, nor Strong; yet, by a certain Motion of my Arm, I have gain'd such a Contentive Shake, that sometimes, my Scholars will ask me How they shall do to get the like? I have then no better Answer for Them, than to tell Them, They must first Break their Arms, as I have done; and so possibly, after that, (by Practice) they may get my manner of Shake."

It is difficult and costly to keep a lute in good order.

Its enemies had no lack of arguments to make use of when fashion began to turn against it. Mace has a delightful chapter about the "Common Aspersions upon the Lute." I wish I could quote it entirely, but space will not allow; he mentions six "aspersions":

"First.—That it is the Hardest Instrument in the World.

"Secondly.—That it will take up the time of an Apprenticeship to play well upon It.

"Thirdly.—That it makes Young People grow awry.

"Fourthly.—That it is a very Chargeable Instrument to keep; so that one had as good keep a Horse as a Lute, for Cost.

"Fifthly.—That it is a Woman's Instrument.

"Sixthly and Lastly (which is the most childish of all the rest).—It is out of Fashion."

As Mace found it necessary to fill up a good sized book to show how easy it is to play the lute, it must be admitted that there was some foundation in the first and second points. Here are some of his answers to the others:

"To this (the Third Aspersion) I can only say, That in my whole Time, I yet never knew one Person, Young or Old, that grew Awry by that Undertaking.

"Yet, do believe it is possible, if (through their own Negligence, and their Teachers Disregard and Unskilfulness) they be suffer'd to Practice in an Ill and wrong Posture * * *"

"That one had as good keep a Horse (for cost) as a Lute, is the Fourth Objection.

"* * * I never took more than five shillings the Quarter to maintain each Lute with Strings; only for the first Stringing I ever took ten shillings.

"I do confess those who will be Prodigal and Extraordinary Curious, may spend as much as may maintain two or three Horses, and Men to Ride upon them too, if they please."

"The Fifth Aspersion is, That it is a Woman's Instrument.

"If this were True, I cannot understand why It should suffer any Disparagement for That; but rather that It should have the more Reputation and Honour.

"I suppose I need not make any Arguments to prove That.

"But according to Their Sence of Aspersion, I deny it to be a Woman's Instrument so, as by That means It shall become less Fit for the Use of a Man.

"For if by That Saying They would insinuate, That it is a Weak, Feeble, Soft Instrument, as to the sound; what can that signifie whereby to make it a Woman's Instrument more than a Man's?

"But, whereas first they say, It is the Hardest Instrument in the World; that shews They Contradict Themselves in This particular; and conclude by That Saying, It cannot so properly be called a Woman's Instrument, in regard They are the Weaker Vessels; and therefore not so Fit to set upon and attempt the Mastery of Things of such Difficulty.

"Therefore if still They will needs put it upon the Woman, I say, the more shame for Them; And so much for That.

"Now Lastly, whereas They most sillily say, It is out of Fashion.

"I say, the Greater Pity, and still the Greater Shame for a Man to Refuse the Use of the most Excellent Thing in Its kind; and especially, Because it is out of Fashion! which, although it be Thus aspers'd by the Ignorant and Inconsiderate, yet notwithstanding It has This General Applause and praize, viz., THAT IT IS THE BEST MUSICK IN THE WORLD."

One more "Choice Observation about Keeping a Lute," and we have done with a book that deserves to be reprinted in its entirety, on account of the insight it gives in such a unique manner upon the Art of Music, and Seventeenth Century things generally.

"And that you may know how to Shelter your Lute, in the worst of Ill Weathers (which is moist), you shall do well, even when you Lay it by in the day-time, to put it into a Bed, that is constantly used, between the Rug and Blanket; but never between the Sheets * * * Therefore, a Bed will secure from all These Inconveniences, and keep your Glew so Hard as Glass, and all safe and sure; only to be excepted, That no Person be so inconsiderate, as to Tumble down upon the Bed whilst the Lute is There; for I have known several good Lutes spoil'd with such a Trick."

The compass of early eleven-stringed lutes did not extend below the G on the lowest line of the bass clef. Their average sounding length of strings being 28 to 30 inches, the bass strings did not need to be very thick to tune to their proper pitch under the right tension; so their tone was satisfactory. But, when lower bass notes came into request, for accompaniments principally, their length had to be increased, whilst the trebles remained unchanged. An additional neck was fitted to carry the bass strings, giving them a length of 40 inches or thereabouts. This kind of lute was called "theorbo."

Sometimes the bass neck was made as long as four or five feet, bringing the total length to six or seven feet. The instrument was then called "archlute."

But these names are a great source of confusion, for we find them differently applied according to the time and country. The "lute" of Mace, for example, was a kind of theorbo, with bass strings of various lengths. In the Seventeenth Century, in England, the lute proper was called the "old lute," and under the name "theorboe" both the theorbo proper and the archlute were included.

These very long instruments were awkward to play, and, besides, the bass strings kept resounding for so long after being struck, on account of their great length, that the music was confused. Towards the middle of the Seven-

teenth Century, when it was discovered that by twisting or gimping round a gut string a fine silver wire its weight could be increased at will and consequently its pitch proportionately lowered without increasing its bulk, the theorbo and archlute fell into disuse, the old form of lute with a greater number of strings being preferable. Thus transformed, the lute remained in use, at any rate in Germany, until the middle of the Eighteenth Century. Bach admired it, and wrote beautiful music for it.

Lute music was written in a special system of notation, quite different from the ordinary one, and called "tablature." Few people understand the tablature nowadays; it is sometimes translated with the help of a key, much as people translate a foreign language with the dictionary, but with what satisfaction I leave the reader to guess.

The tablature is written on a series of six parallel lines, which represent the six principal strings, or rather pairs of strings of the lute, instead of the scale of music. In the English, French, and German tablature the letter "a" on the top line indicates that the treble string, whatever its pitch, is to be played open; the letter "b" indicates the same string, but stopped at the first fret; "c," or rather a Gothic form of "c" resembling a modern quarter rest, refers to the third fret, and so forth. The same figures on the other lines apply to the other strings according to their respective order. The bass strings are noted below the stave, the number of ledger lines before a letter indicating the particular string intended. For ease in reading, instead of four ledger lines, the figure 4 is used and so on for 5, 6, etc.

The duration of the notes is shown by characters placed above the lines. In the Italian and Spanish tablatures the principle is the same; but the treble string corresponds with the lowest line, the order being thus inverted. Figures are used instead of letters, 0 corresponding to a, 1 to b, 2 to c, and so forth.

This system of notation is a direct pictorial representation of the actual performance of the music. It is concise and accurate, and possesses the immense advantage of applying to any tuning of the instrument without disturbing the player. But, apart from the particular instrument and tuning for which it was intended, it is meaningless. It does not convey music directly to the brain like the staff notation.

SECTION II.

THE VIOLS.

A great variety of stringed instruments played with a bow, in use in Western Europe from the Middle Ages to about the end of the Eighteenth Century, is comprised under the name viols.

To study their transformation during six or seven centuries would require a long treatise. We shall mainly consider in these notes the typical perfected viols used from the latter part of the Sixteenth Century until the time when violins were left sole masters of the field.

The disappearance of the viol is regrettable, for it has not been replaced by the violin. The aims and capabilities of both were differentiated even in the earliest times. The three-stringed rebec, prototype of the latter, dry and sharp, was best for popular tunes and dances. To the viol, with its many strings, low and sweet, refined music and harmony was rightly appropriated. As a consequence of the development of the orchestra, which greatly increased the demand for violin players, professional musicians gradually relinquished the study of the viol, not so serviceable for orchestral purposes. The amateur was left without guidance; and, as in every age he only imitates the master, the viol soon became wholly disused, although it is better adapted for chamber music than its rival, and more resourceful and pleasurable for private use.

The form of the viol is simpler and smoother than that of the violin. The shoulders, instead of starting at right angles from the neck, join it at a tangent. The corners turn inward instead of outward. The back is flat; the belly vaulted, but rising insensibly from the edges to the center without forming a groove first. The ribs or sides are higher, making the instrument thicker in proportion. The back and the belly terminate flush with the ribs; they do not project over them, and so there is no rim round the instrument. The sound-holes are in the form of crescents, or C's pointing outwards, sometimes in the conventional figure of a Flaming Sword, very rarely in the form of the violin "f." The neck, long and thin, is fretted with tied pieces of gut, as in the lute; it is wider than the violin's, so as to accommodate a greater number of strings and allow more room between them for playing. The strings are longer, thinner and less tense than those of the violins; their classical number is six, although viols of five or seven strings are not rare, and the number may reach up to fourteen. The tuning is by intervals of a fourth, with a third toward the middle of the compass, like the lutes.

The peg-box, often decorated with carvings, usually ends in a man's or woman's head, a lion or other animal, or, when a scroll, a simpler one than the volute of the violin. The body, the fingerboard and tail piece are ornamented with inlays, or patterns of lines. A small carved rose is often present in the upper half of the sound-board; and, generally, much care and taste was spent by the makers in beautifying the viols, an unmistakable proof of the high esteem in which they were held.

CONSORT VIOLS.

There is a complete family of viols, from a small thing not more than two feet in length, to the largest, nearly eight feet high. The five principal sizes are treble, alto, tenor, bass, and double bass, the latter being generally called

violone. A "chest of viols" in Elizabethan times consisted of six instruments: two trebles, two tenors, or alto and tenor, and two basses. The violone was very little used in England.

The music played upon these "consort viols," as they were called, consisted of fantazies, in nomine, pavans, galliards, allmains, and other dance-measures. The chief among these were the fantazies, also named "fancies." They were written for two, three, four, five or six viols, and so contrived that all parts, whatever their number, were different from one another, and of equal interest. No two viols ever played the same thing at the same time. It was an interweaving of patterns of sound.

"In this sort of music," says Christopher Simpson in his "Compendium of Music," published in London in 1665, "the Composer employs all his art and invention solely about the bringing in, and carrying on of Fugues. When he has tried all the several ways which he thinks fit to be used therein, he takes some other point, and does the like with it: or else for variety, introduces some chromatick notes with bindings and intermixture of Discords; or falls into some lighter Humour, like a Madrigal, or what else his own fancy shall lead him to; but still concluding with something that hath Art and Excellency in it."

The word "fugue" did not mean, as it does now, a composition cast in a rigid form, but a theme or subject so contrived as to lend itself to the answers, imitations, inversions, and such like devices which formed the soul and spirit of this decorative music. A "point" would be some new theme, perhaps cunningly extracted from the foregoing fugue, and treated likewise in its turn.

The "in nomine" were more restricted than the fantazies. They were built upon a "plain-song," generally the old liturgic tune to the words "In nomine Domini," from which their name is derived. This plain-song being played in very slow, long sustained notes by one of the viols, most

commonly one of the middle parts, the other viols embroidered upon it a descant so beautiful and ingenious, though apparently free, as to strike the modern musician with admiring wonder, in our days of degenerated skill, when counterpoint has become a drudge in the hands of teachers.

The pavans and galliards, noble, stately dances in slow time, still afforded the composer occasions to exhibit his contrapuntal skill; but, as we come down to the lighter dances, the music becomes less elaborate, in the end a mere accompanied tune.

"You need not seek Outlandish Authors," Christopher Simpson remarks, "especially for Instrumental Musick; no Nation (in my opinion) being equal to the English in that way."

One of the very last examples of English music ever written is an admirable and most effective "fantazie upon one note," by Henry Purcell, the last composer of the English school. It is for five viols, and the tenor, instead of a plain-song, plays one single note, the middle C, and sustains it right through the piece, whilst the others weave round it most exquisite music.

Purcell tells us of his endeavors to imitate the Italian music, which was then getting so much in fashion. But he had been brought up under the influence of the English masters; the bend of his genius was strong, and his music never lost its national character. His successors to this day have imitated the foreign schools with such success that it has been the death of English music.

THE VIOLA DA GAMBA.

The most interesting of the famliy of viols, taken individually, is the small bass, which, under the name of viola da gamba, held a position in the musical world second only to the lute, until about 1650, and first in importance among stringed instruments afterwards. Viola da gamba,

in Italian means, "the viol of the leg," from its being supported between the legs of the performer. Corrupted into "viol de gamboys," the name is frequently to be met with in the literature of Shakespeare's time. We hear of Sir Andrew Aguecheek, in "Twelfth Night," that "he plays upon the Viol de Gamboys, and has all the good gifts of nature."

According to Jean Rousseau, in his Traité de la Viole, published in Paris in 1687, the English first brought their viols to the shape and size best adapted for performance of elaborate music. "Les premières violes dont on a jouéen France," he tells us, "étaient a cinq chordes & fort grandes * * * en sorte que le Père Mersenne dit que l'on pouvoit enfermer de jeunes Pages de la Musique dedans pour chanter le Dessus, pendant que l'on jouoit la Basse & il dit de plus que celà a esté pratiqué par le nommé Granier devant la Reyne Marguerite, où il jouoit la Basse & chantoit la Taille, pendant qu'un petit Page enfermé dans sa Viole chantait le Dessus." Truly a delightful picture, and far removed from the present time! Later on he writes: "Il est vray que les Anglois ont réduit leurs Violes à une grandeur commode, devant les François, comme il est facile d'en juges par les Anciennes Violes d'Angleterre, dont nous faisons une estime particuliére en France."

In England the most esteemed kind of viola da gamba music was the "divisions on a ground." The ground consisted of a few bars of slow notes in the character of a bass, to be played over and over again upon an organ, harpsichord, or other instrument suitable for the accompaniment. The divisions were effected by "dividing" the long notes of the ground into shorter ones, making runs and ornaments upon them like modern variations: or by inventing some tune or passage in suitable harmony with the ground, or by a mixture of both things. Innumerable sets of such divisions are in existence, fine and effective pieces, well calculated to show the imagination of the composer and the skill of the

performer. The best of them are by Christopher Simpson, author of the Compendium from which I have already quoted, and the greatest among the English viola da gamba players. He published in 1659 another fine and scholarly treatise, entitled "The Division Violist," in which he teaches at length how to write and extemporize divisions, after having first described the viol, and explained the best method of playing upon it.

"Being conveniently seated," he tells us, "place your Viol decently betwixt your knees; so that the lower end of it may rest upon the calves of your legs. Set the soles of your feet flat on the floor, your toes turned a little outward. Let the top of your viol be directed towards your left shoulder; so, as it may rest in that posture, though you touch it not with your hand. Hold the Bow betwixt the end of your thumb and two fingers, near the nut. The thumb and first finger fastened on the stalk; and the second finger turned in shorter, against the hairs thereof; by which you may poize and keep up the point of the bow. If the second finger have not strength enough, you may joyn the third finger in assistance with it; but, in playing swift division, two fingers and the thumb is best."

These directions apply to all kinds of viols, only excepting the viola d'amore, for they were all held downward in playing, even the trebles. In Mace's Musick's Monument, the third part of which "Treats of the Noble Viol in its Rightest Use," much valuable information is also to be found. After explaining how to hold the viol and bow, he gives this piece of advice, which, if applied to the violin pupils of our time, might save our ears much excruciating torture: "A good stroke above all things. Now, being Thus far ready for Exercise, attempt the Striking of your strings; but before you do That, Arm yourself with Preparative Resolutions to gain a Handsome — Smooth — Sweet — Smart — Stroke; or else Play not at all; For if your Viol be never so Good, if you have an Unhandsome —

Harsh — Rugged — Scratching — Scraping — Stroke (as too many have) your Viol will seem Bad, and your Play Worse."

The ideals of French viola de gamba players were different from the English. They did not care so much for division, but preferred the preludes, fugues, and dance-measures such as chaconnes, allemandes, courantes, sarabandes, gigues and menuets, of which they formed these admirable suites which served as models to John Sebastian Bach.

So full of beauty and expression are their melodies, and enhanced by harmonies so rich and daring, that the modern musician, who still believes harmony to be a latter-day science, could not help feeling bewildered at first by this music.

Characteristic pieces, little tone poems with attractive titles, such as "La Plainte, La Mignonne, La Trompette, Le Papillon," were also much in vogue in France.

Among the most famous composers of the French school we find M. de Ste. Colombe, credited by Jean Rousseau with the addition of a seventh string to the viol, an assertion disproved, however, by Dominichino's picture of St. Cecilia; Marin Marais, who composed an immense number of most valuable pieces, between 1695 and 1730, the two Forquerays, father and son, who carried virtuosity to its utmost limits; and De Caix d'Hervlois, remarkable for his grace and charm.

We possess some excellent suites by Augusto Kuhnel, 1690, Johann Schenck, and other German composers in which the possibilities afforded by the viol for playing chords are so skilfully used that an accompaniment is hardly needed. Georg Philip Telemann, Bach's contemporary and rival, wrote numerous fine sonatas in the melodic style, with a figured bass for accompaniment on the harpsichord.

Johann Sebastian Bach gave many important parts to the viola da gamba, principally in his religious music; fore-

most among these is the glorious obbligato in "Komm Susses Kreuz," one of the most touching airs in the St. Mathew Passion. This song is now generally omitted in performance, on account of the difficulty of procuring a competent violist. Bach also wrote three beautiful sonatas for the viola da gamba and harpsichord, which, however, are not at present appreciated as they deserve, for they sound ineffective as usually played upon a violoncello and pianoforte, neither instrument being able to do justice to the music.

THE LYRA-VIOL.

In size somewhat less than a division viol and strung with thinner strings, the lyra-viol had various tunings based upon the intervals of a major or minor common chord, the chief among them being called "harp-way-sharp and harp-way-flat." Its music was written in tablature, like that of the lute, to avoid confusing the player with the changes in tuning. In fact, although much used by itself, or with one or two more lyras, it was frequently played in consort with lutes of various kinds. In the British Museum is preserved a precious manuscript containing no less than one hundred suites of pieces for two lyras and theorboe, by John Jenkins, c. 1630.

The word lyra is often found as "leero," "lero," and in other shortened and corrupted forms.

THE VIOLA D'AMORE.

There is in my mind a connection between the lyra-viol and the viola d'amore, but I cannot clearly trace it. According to Jean Rousseau, the English did partly string some of their viols with brass wire, and a "viole d'amour" strung with wire, instead of gut was known in his time. Its tone had a pretty silvery ring, but Rousseau is right when he asserts that metal strings produce a wretched effect under the bow. Some unknown ingenious person succeeded

in combining the advantages of both gut and wire strings. The viol was provided with a set of each kind, so that, the gut strings being played upon in the usual way, the wire strings would vibrate in sympathy with them, though untouched by either bow or finger. This, of course, can only happen when the note played is in tune with one of the wire strings or some of its lower harmonics, according to the well-known law of sympathetic vibrations.

Attached to pins fixed to the lower part of the ribs or to the belly under the tail-piece, the sympathetic strings, six or seven in number, pass through little holes in the bridge, through a hollow space under the finger-board and over a little nut placed at their point of exit at the end of the neck. From there they thread their way to the tuning pins placed at the further end of a much-elongated peg-box.

The sympathetic strings do not increase the volume of tone. The old makers did not trouble to give more power to an instrument that had enough to make itself well heard. They knew that quantity is antagonistic to quality. In point of fact the wire strings, by their pressure on the sound-board, veil the tone somewhat. But they produce a delightful resonance, almost ethereal in quality, which renders the instrument most effective for the performance of suitable solo music.

Whether the name viola d'amore is an allusion to the sympathy between the two sets of strings, or to the amorous quality of the tone, or simply a corruption of viola da More (the viol of the Moor), remains an open question. The makers themselves were not agreed on the point, if we may judge from the symbolism of the figures with which they decorated their viols d'amore. Some have a winged angel's head, some a cupid blindfolded, others a blackamoor.

Whatever its origin, the viola d'amore proved quite a sensational novelty when Attilio Ariosti came to London and gave performances upon it in 1716. Delicate and refined, his genius suited the nature of the instrument to

perfection, and his six sonatas for the viola d'amore are our most precious compositions for that instrument. But one must not forget that Bach used it frequently in his cantatas and chamber music, and mention must be made of an exquisite concerto by Antonio Vivaldi for viola d'amore and lute accompanied by muted violins and a figured bass. Should this bass happen to be discreetly performed upon a sweet old organ, the effect of the whole composition is a dream of loveliness such as is never to be forgotten if once heard.

SECTION III.

THE CLAVICHORD.

The mechanism of the clavichord is very simple. The strings, made of brass, and hardly thicker than a hair, rest upon a bridge at one end as in other stringed instruments, but the other end instead of going to a nut, loses itself among folds of damper felt, by which they are so completely deadened that no musical sound is perceivable upon their being plucked. When a key is pressed down, the tangent, a thin blade of brass driven perpendicularly into the key near its back end, comes in contact with the two strings allotted to that note at a point between the damper and the bridge, slightly raising them over the other strings. Under these conditions this pair of strings can vibrate between the tangent and the bridge and yield its particular note. The tangents of the clavichord perform the same office as the fingers of the left hand of the player upon the violin or guitar. They are movable nuts or frets. Furthermore, by their impact, they agitate the strings sufficiently to cause them to sound. The tangent, therefore, measures off the length of string necessary to produce the required pitch, at the same time, excites the tone.

When the finger is lifted from the key the sound instantly ceases, for the tangent is thereby removed from the strings, which relapse into their formal musical inertia.

The volume of tone of the clavichord compared with that of the modern piano is very small. But its small tone is capable of the most subtle shading, the sharpest staccato as well as the smoothest legato. The finger, through the key, is in direct communication with the strings and feels their elasticity all the time. If the pressure of the finger is increased, a sharpening of pitch which produces the impression of a swelling of the tone is produced,— if the key is balanced up and down by the finger, the alternate sharpening and flattening of pitch produces a beautiful vibrato.

The importance of these properties of the clavichord cannot fail to be recognized, if one remembers the great value of such alterations of pitch as a means of expression in music. They constitute the chief distinction between the living tones of the voice or the violin and the mechanical tones of the piano or organ.

Another advantage of the clavichord is that its tone production is accompanied by very little mechanical noise. When the hammers of a piano strike the strings, a distinct blow is heard, even more powerful at times than the tone of the strings. This emphasizes the beginning of each note to such an extent as to make it difficult for the ear to follow the individual movement of each part of the music, undue attention being constantly called to every movement of the other parts.

The older clavier music is for the most part contrapuntal and for this reason ineffective upon the piano.

To hear an expressive fugue upon the clavichord is a revelation. There the interweaving of the parts is clearly followed, and each one stands out characterized by its own proper expression. Beethoven, during whose youth the clavichord was still used in Germany, acknowledged it the most expressive of keyboard instruments. J. S. Bach wrote for it most of his clavier music.

In a quaintly worded article of the great French Eighteenth Century Encyclopedia we learn that "Un célèbre musicien allemand, nommé Bach présentement directeur de la musique de la ville da Hambourg, ne juge d'un joueur de clavecin qu'après l'avoir entendu toucher du clavicorde."

The touch of the clavichord is extremely light, and yet the German organists of the Eighteenth Century who were trained upon it were able to play on the organs of that time which, with three or four keyboards coupled together, required a much greater physical strength than the instruments of our days. The old musicians knew that the way to acquire strength of fingers without impairing delicacy and sensitiveness is by practising the clavichord first, and frequently returning to it.

The clavichord went out of fashion when volume of tone became the desideratum in musical instruments. Now that loudness has been carried to its utmost limits, and beyond, the clavichord proves the best remedy against the evil consequences of this state of things.

After many years of study and experiment, I have become convinced that the practise of the clavichord, quite apart from its own fascination and the light it sheds upon the understanding of the old music, is of inestimable benefit to piano-players. It discloses fresh ideals, opens new ways of thought and brings new sets of muscles into action. Under its gentle influence the stiffness of hand and heaviness of brain, which so frequently prevent the execution of light, rapid passages, and the expressive performances of melodies, vanish as by magic.

Music-lovers should practise on the clavichord some of the simplest two-part inventions and preludes of Bach. For example: the first invention in C major or the 13th in A minor; or the 1st Prelude in C major of the first part of the Well-tempered Clavichord, or the 3rd in C major of the same book, playing them at first in the softest tone possible, yet striving to produce each note clear and to give it its

proper musical value. When a command of the softest tone has been acquired it is easy to increase its volume; one need only apply more strength; but there is much danger of never acquiring a beautiful tone if one strives after too much power at the start.

In playing the clavichord, care should be taken to relax entirely the pressure on the key immediately after the tone is produced. The tangent should just only remain in contact with the strings so that the tone may continue. If this is done, the clavichord will not sound out of tune, even if the keys are struck to the limit of endurance of the strings.

One should try to play expressive melodies with as much feeling as could the voice or violin, or rather with all the expression that one's soul is capable of feeling. The clavichord will be found adequate for this. One should remember, however, that as the limit of its tone is very soon reached in the way of power, but practically infinite in softness, the softer one can play the greater will the range of expression be.

A fugue could now be tried, such as the 1st one in C major or the 21st in B major from the first part of the Well-tempered Clavichord. It is wonderful how clearly the several parts come out and how beautiful the composition will sound if well contrived. After that a sonata by Mozart or Beethoven, or anything else one may fancy, provided it is not opposed to the nature of the instrument, as would be, for instance, a rhapsody of Liszt.

The clavichord being very simple in construction does not easily get out of order. There are no parts in it to wear out. Its tone improves by playing. It keeps admirably in tune. A novice might break a string or two at first, but they are easy to replace, and one such warning against undue violence is generally sufficient. The instrument is not large, it is pleasing to the eye and its cost is quite moderate.

SECTION IV.

VIRGINALS, HARPSICHORDS AND SPINETS.

These instruments all belong to the same family. They have metallic strings, one or more keyboards, and their tone is produced by a plectrum which acts like the fingers of the player upon the harp. The device which plucks the strings is called a jack. It is found in almost identically the same form in the earliest known instruments of that kind, as in the latest, and in all countries.

In England from the Fifteenth Century to about 1650, all keyboard instruments with plucked strings, were called virginals. Under that name were included:

First, the harpsichord, wing-shaped, its keys placed in a line with the strings and its keyboard forming a right angle with them. It was called double virginal when it had two keyboards.

Second, the rectangular or oblong instrument with keyboard parallel with the strings, or nearly so.

Third, the pentagonal or hexagonal instrument, similar in construction to the former, but with two or three corners cut off.

Fourth, the clavicytherium or upright spinet, with perpendicular strings.

About 1660, Thomas Hitchcock of London, made an instrument in an oblique wing-shape, like a small harpsichord but much inclined to the right, the keyboard making an acute angle with the strings. It became known as the spinet. Its tone was good, its form graceful. It soon achieved a great success. It superseded the oblique and pentagonal instrument and remained in vogue until the end of the Eighteenth Century.

The name virginal became restricted to the oblong and pentagonal instruments about the time when the spinet was invented, the name harpsichord or harpsicon being then

applied to the larger instruments. The words spinet and harpsichord are both derived from the Italian, the first from Arpicordo, the second from Spinetta, which latter name was applied in Italy to all instruments with transverse or oblique strings.

In Italy the harpsichord was also known as cembalo. In France the spinet and virginal were called espinette, and the harpsichord, clavecin. The Germans used the word cembalo for the harpsichord and commonly called the spinet "instrument." A small spinet tuned an octave higher than normal pitch, was called octavina or octave spinet. It was convenient to carry about on account of its smallness. Its usefulness and attractive shape caused it to become quite popular.

The characteristic feature of the instruments mentioned above, is the jack. It is made of a rectangular piece of wood about half an inch wide and a little over an eighth of an inch thick, which stands perpendicularly upon the back end of the key. It is maintained in place by a rack. In a slot cut in the upper part of the jack, a little tongue of wood is hinged in such a manner that it can swing a little way backward and forward. In the tongue the plectrum is inserted. This plectrum is made of leather, more or less hard, or a piece of the backbone of a crow quill, according to the quality of tone required. When a key is lowered, the jack raises the plectrum, catches the string on its way, and makes it ring. When the key is released, the jack falls down and the plectrum returns to the string, but instead of making it sound, it glides silently upon it, for the tongue swings back. When the plectrum has passed the string, the tongue returns to its original position, being pushed by a piece of bristle adjusted at its back, which acts as a spring. A damper is provided to stop the vibration of the strings when the note is played. It consists of a small piece of cloth fixed in a slot cut on the side of the jack and so regulated as to just touch the string when the key is at rest.

In the virginal and spinet there is only one string and one jack for each note, and, consequently, only one kind of tone, but in the harpsichord there are at least two sets of strings and two rows of jacks. Exceptionally harpsichords were made with four or more sets of strings, many rows of jacks and three keyboards, but the ordinary standard instrument has three sets of strings, four rows of jacks and two keyboards. Such a harpsichord is capable of producing a great variety of sounds of different color and degrees of power.

The old harpsichords differed much in their construction and capabilities. To describe their various forms would not be possible here. A description of the harpsichords now being made under my direction by the firm of Chickering & Sons, Boston, and which embody the best points of the old ones, here follows:

In the new harpsichords there are two keyboards, three sets of springs, four rows of jacks and six pedals. Of the three sets of strings, two are tuned at the usual pitch, or what in the organ is called eight foot tone. They are the first and second unison. The strings of the third set are higher, giving four foot tone. This is called the octave. The strings of the first and second unison are stretched over a bridge ⅝ of an inch high or thereabouts. The two strings giving the same note, are about half an inch distant from one another, the left-hand one being the first unison, the right-hand one the second. The octave strings have a bridge of their own which is lower, being about ¼ of an inch high. They are not exactly under the first unison but a 32d to the right of it, the jacks working between the first unison and the octave on the left and the second unison on the right, their plectra being turned toward the strings on which they play. The distance between the second unison string of one note and the first unison of the next, is only about 1-16 of an inch; this being much nearer than the first unison of the same note, the strings

appear at first sight to be arranged in groups of two, and to one familiar with the arrangement of strings in a piano, the first impression would be that the two strings next to one another, belonged to the same note, whilst in reality, they belong to two different notes. If one considers the oblique line of the bridge, which causes the strings to become longer and longer from treble to bass, it will be seen that the left unison strings are longer than the right, in the proportion of nearly a semi-tone. This is one of the causes of the differences of timbre between the two unisons.

The strings of the harpsichord are all made of steel and their diameter is very much smaller than that of the piano. The thickest of the former is less than half the diameter of the thinnest in the latter. In the bass the strings are covered with a copper or brass wire wound around them. This is an improvement upon the old method of using brass and copper strings. The covered strings have a finer tone, keep in tune better and last longer.

The four sets of jacks can be seen by removing the jack-rail, a piece of wood placed near the front of the harpsichord and extending right over the strings from left to right. It is hooked on the instrument on the bass side and is held by a bolt on the treble side. The jacks stand in four parallel rows, kept in position by racks or slides. These slides are provided with slots fitted so as to allow the jacks to move freely up and down but without wobbling. The slides can shift to right and left about 1-16 of an inch. Their movements are controlled by the pedals. By pressing down a pedal, the jacks of the corresponding row are brought under the strings so that the point of each plectrum catches its string when the key is played. By lifting the pedal, the jack recedes from the string so that the plectrum cannot touch it. Each row of jacks can thus be brought in or out of action at will.

The jacks of the row which is farthest from the front of the harpsichord, have leather plectra. They are turned

toward the left and play upon the first unison strings. Their leather is rather soft. The point of attack of the strings is farthest removed from the nut, and the first unison strings are the longest. For these reasons the tone of the first unison is fuller, sweeter and more diapason-like than the others. It is the foundation stop of the harpsichord. Its pedal is second of the six.

The jacks of the row next to the above, which is the third from the front, are turned to the right and play upon the second unison strings. These strings are shorter than those of the first unison. The leather of the plectra is harder and the striking point is nearer to the nut. The tone of this stop is lighter and more metallic than the first unison. Its pedal is the first of the row.

The second row of jacks has hard leather points. They are turned to the left and play upon the octave strings. The octave has a brilliant and clear tone. Its pedal is No. 3.

The jacks of the above three rows stand upon the keys of the lower or first keyboard, and are only played from that keyboard. The three jacks of each note can be seen moving up and down when a key is played, but they can only catch the strings when their row has been brought into playing position by a pedal.

The jacks of the first row have points of crow or raven quills. They are turned to the right and play upon the strings of the second unison, standing upon the keys of the second keyboard. These jacks are shorter than those of the other three sets, since the second keyboard is placed over the first and there is less distance from its keys to the strings. The striking points of this stop are nearest to the nut. This fact and the quill plectra combine to give it a reedy tone, which might be compared to that of the oboe in the treble and the bassoon in the bass.

When all the pedals are up, this stop is ready for playing.

When the first pedal is lowered, its jacks are removed from the strings and at the same time the jacks of the second unison are brought to the same strings. In this way the three sets of strings can be played together from the first keyboard, producing all the tone of the instrument. This double movement of the first pedal is a great convenience. It does the work of two pedals. The two rows of jacks could not play on the same strings without interfering with one another, and one of the slides would have to be withdrawn before the other is brought into action.

The fourth and fifth pedals bring in the harp stops, which very closely imitate the tone of the harp. The effect is produced by dropping upon the strings of the first and second unisons, very near to the nut, a small leather button covered with felt, which partially damps them. It destroys the metallic quality of tone and makes it resemble that of gut strings.

Pedal four brings the harp to the first unison; pedal five to the second. As the second unison can be played either from the first or second keyboard, according to the row of jacks used, the second harp is effective on both keyboards, but on account of the quill points of the jacks of the second keyboard the sound produced thereon is not much like a harp. It has its own peculiar charm, however, and is useful as a contrast with the others.

The sixth and last pedal couples the two keyboards so that by playing upon the first the keys of the second are worked simultaneously.

In the old harpsichords this was effected by drawing the second keyboard a little way toward the front. This necessitated removing both hands from the keys. The present arrangement is a new device which proves very convenient.

The pedals can all be fixed in playing position by pushing them a little way to the right after pressing them down.

The effects produced by their various combinations, are very numerous. Each particular piece of music can be played in such color of tone as makes it most effective. In the old harpsichords the changes of tone are usually effected by hand stops. In the English instruments of the second half of the Eighteenth Century, there is commonly one combination pedal to bring contrast of piano and forte. In the French harpsichords of the same period knee levers are used for the same purpose. Still the idea of working the stops entirely by pedals is not new, for an instrument provided with this arrangement is described in Thomas Mace's "Musick's Monument," a most interesting book published in Cambridge, England, in 1676. It is remarkable that such a useful invention should not have been at once adopted and retained as a permanent feature of the harpsichord.

Some of the pedal combinations most often used are the following:

If pedal 2 is hooked down, the left foot placed over pedal 1, and the right foot kept within reach of pedals 3 and 4, the following effects are obtained: without further touching the pedals, the first unison is ready on keyboard 1, and the quills stop on keyboard 2. Each keyboard can be played by itself or the right hand can play upon one and the left hand upon the other. The use of two independent keyboards is frequently indispensable in playing music of the Seventeenth and Eighteenth Centuries.

When playing upon keyboard 1, press down pedal 1. This gives an increase of tone and at the same time the beautiful effect of the two unisons, which is valuable for singing sustained passages. Only remember that the second keyboard is dumb for the time and can only play when pedal 1 is up.

To the first unison on keyboard 1, for which pedal 2 is already supposed to be hooked down, add pedal 3, the

octave. This will give the four and eight foot strings together, giving a clear and brilliant tone. Add pedal 1 with the left foot, and the whole power of the instrument is available.

Lift pedals 1 and 3, which leaves only the second pedal hooked. Hook pedal 4 down and you will have the harp on keyboard 1. A melody can be played on keyboard 2 and accompanied on the harp on keyboard 1.

Hook pedals 4 and 5, keeping the left foot over pedal 1 and the right over pedal 2. By pressing down one or the other or both, you get the first or second harp or the two together. This gives three different effects of color and strength in the harp tone.

If pedal 1 is up, the metallic harp on keyboard 2 can be used as a contrast to the soft harp on keyboard 1.

Unhook pedals 4 and 5 to remove the harp stops. Pedal 2 being hooked, put down pedal 6. The first and second keyboards would thus be coupled and a beautiful reedy tone produced on keyboard 1. If you add pedal 3, you have again the full tone of the instrument but in a more brilliant color. If you release pedal 2, leaving only pedals 3 and 6, you will get a very brilliant but somewhat thin tone.

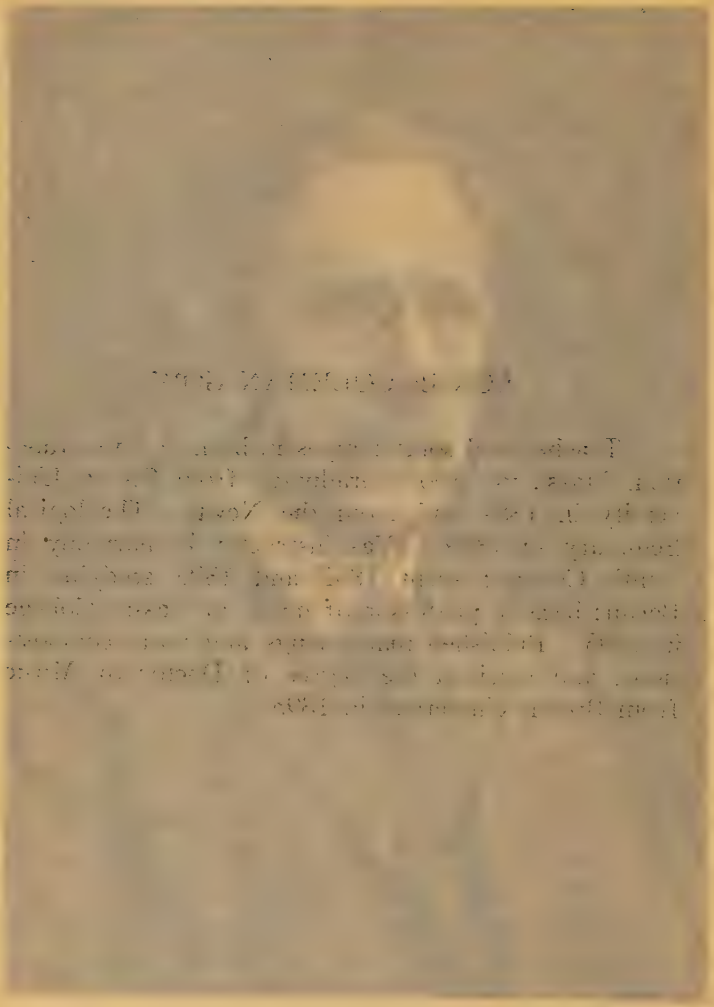
It is possible on the harpsichord to sustain a bass note or chord although the fingers are removed from the keys and free to play something else. Use the second unison alone or with the octave, put down the first unison an instant before playing the note or chord to be sustained, and release the pedal before taking the fingers off the keys. The tone of these notes will be sustained for a long time. Another way is to couple the two keyboards with or without the octave, and to use the first unison for sustaining as above; the effect will be still more striking. This sustaining effect is also effective in connection with the harps.

There was a general opinion among musicians, and many of them believe it now, that the piano being a later

instrument that the harpsichord and clavichord, had all the advantages of both and many others besides. As a consequence they thought it quite legitimate to play upon the piano the music written before its invention, and they believed that it sounded better so than upon the instruments for which it was intended. They pitied the old composers who had such inadequate instruments to realize their music on. Their mistake is easily understood. Their opinion of the old instruments was based upon such specimens as they had seen exhibited to illustrate lectures upon the history of music. Poor old cracked, battered things, which were no doubt all right in their time, but through 150 years of neglect are now mere ghosts, decayed almost beyond the powers of restoration of an expert, and still more of the piano-maker not acquainted with their mechanism to which they had probably been entrusted. Moreover, the musician who played upon them, knew how to play the piano or organ but probably had no knowledge of the old instruments. No doubt in such cases the piano would be preferable, but under proper conditions, with a good instrument in the hands of an experienced player, the result is radically different. The beauty and fitness of the music and the instrument, strikes one as a revelation and one realizes that the performance on the piano of harpsichord and clavichord music must be considered as a transcription, an arrangement, no better artistically than other arrangements or transcriptions.

GEORGE COLEMAN GOW

Teacher and song composer; born at Ayer Junction, Mass., in 1860. Graduated from Brown University in 1884 and from the Newton Theological Seminary in 1889. Was instructor in harmony in Smith College; spent 1892 and 1893 studying in Berlin; became professor of music in Vassar College in 1895. Published many songs and vocal compositions, and received the degree of Doctor of Music from Brown University in 1895.



ELEMENTARY THEORY AND NOTATION

TWELVE LESSONS.

GEORGE COLEMAN GOW.

ANALYSIS OF CONTENTS.

I. Introductory Paragraph.
II. Notation of Pitch: The Scales.
III. Notation of Pitch: Keys and Signatures.
IV. Notation of Pitch: Intervals.
V. Notation of Duration: Relative Duration.
VI. Notation of Duration: Special Notation.
VII. Notation of Force and Color.
VIII. Rhythm: Accent Groups.
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X. Cadence Groups and the Effect of Rhythm on Notations.
XI. Chords.
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ELEMENTARY THEORY AND NOTATION

GEORGE COLEMAN GOW.

LESSON I.

INTRODUCTORY PARAGRAPH.

The material of music is *musical tones.*

A MUSICAL TONE is a sound produced by the regular, rapid vibration of a sonorous substance (body) at a given rate.

[NOTE.—Further explanation of this statement is to be found in the Dictionary of the American History and Encyclopedia of Music, article ACOUSTICS.]

The four characteristics of a musical tone are:

(*a*) PITCH, i. e., rate of vibration. Tones may be high or low. The more rapid the rate of vibration the higher is the pitch.

(*b*) DURATION, i. e., extent of vibration. Tones may be held for a long or a short period of time.

(*c*) VOLUME, i. e., amplitude of vibration. The wider the path of vibration the louder the tone.

(*d*) QUALITY, or TIMBRE, i. e., complexity of vibration.

[NOTE.—Further explanation of this statement is to be found later on in these lessons.]

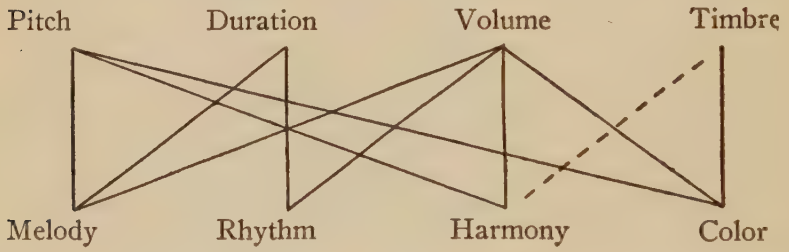
The mere existence of musical tones is not enough to create music. They must be organized under the laws of rhythm, melody, harmony and color.

Musical rhythm is mainly concerned with the duration and volume of tones.

Melody is mainly concerned with the pitch, duration and volume (or the pitch and rhythm) of tones.

Harmony is mainly concerned with the pitch and volume of tones.

Color is mainly concerned with the timbre, pitch and volume of tones:



Not all possible pitches are in use in music; neither all possible volumes, durations, or timbres. After a long history of experimentation the civilized world has settled upon a comparatively fixed musical system, subject to growth and modification like to that of a well-developed living language, but with its elements complete and all utilized in some degree.

As with all language the system of writing music lags somewhat behind the actual state of the art. After long experimentation the system universally adopted is that of the STAFF NOTATION, in which the characteristics of tone are indicated with approximate accuracy. In this notation pitch has been developed most fully, duration next, then volume, and timbre least of all. So far from adequate to the needs of modern music, however, is staff notation at present, that frequent new systems are devised and urged upon the musical

world. But as yet they share the fate of volapuk and esperanto, failing utterly to displace the notation they oppose.

Questions on the Introductory Paragraph.

1. Are the sounds made by birds to be classed as musical tones? Are there other sounds in nature which are musical?

2. Why is it technically inaccurate to speak of the *music* of birds?

3. What characteristics of musical tones can be ignored in rhythm? What in melody? What in harmony? What in color?

4. Which one of the elements of music has in the past been deemed least essential, as proven by the present state of its notation? Which most essential? Which is the most universal?

Notations of Pitch: The Staff.

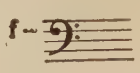
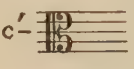
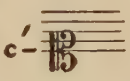
A NOTE is the written symbol of a tone.

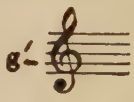
The STAFF is the system of horizontal lines and spaces upon which the pitch of tones is indicated by the position of the notes.

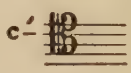
The entire staff is never used. Sections of it, of five lines each, are used regularly, with temporary additions to accommodate notes which lie too high or too low to have a position in the section.

A complete staff would require about thirty lines.

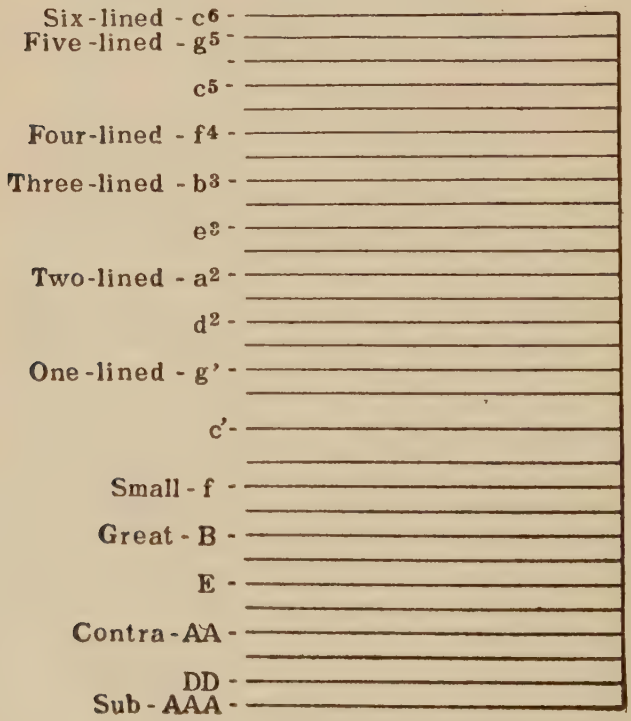
A DEGREE is a position (line or space) upon the staff. To each degree a letter name is given corresponding to the names of the tones. These are C, D, E, F, G, A and B, after which a higher C begins its series. To each series also is given a special name, namely, Sub-, Contra-, Great-, Small-, One-lined-, Two-lined-, Three-lined-, Four-lined-. Thus every pitch has its exact name, and one may know just where in the great staff is its place.

A CLEF is a sign (modified originally from the letter of its degree) placed at the beginning of the staff-section to locate the degree upon which it is placed and thus to determine the place of the section in the great staff. The clefs commonly in use are one-lined g, upon the second line of its section, small f, upon the fourth line of its section  and one-lined c, upon the fourth line, or third line  or more rarely, upon the first line of its section. 

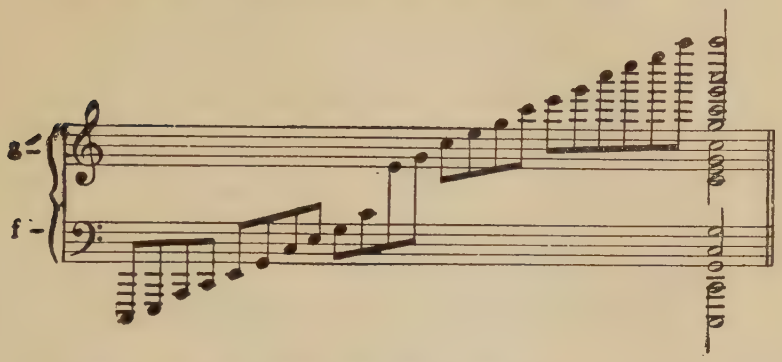




THE GREAT STAFF, THEORETICAL.



THE MODERN PRACTICAL USE OF THE GREAT STAFF.



Music written upon the staff section having the G clef is said to be written *in the G clef,* or in the Violin clef; that written upon the staff section having the F clef is said to be written in the Bass clef; that with the C clef upon the fourth line, in the Tenor clef; with the C clef upon the third line, in the Alto clef.

One-lined C is called middle C, and is to be regarded as the central tone of the musical system.

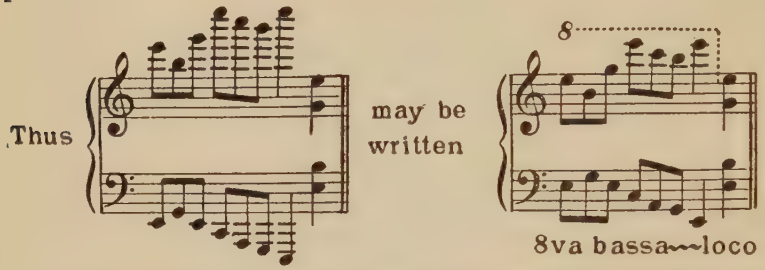
When the G and the F clefs are used together in notating music, as in writing for the pianoforte, the two portions of the staff are joined by a BRACE. This greater staff lacks only the line middle C to make it continuous; but the break in continuity is a help to the eye. Middle C when wanted may be put adjacent to either clef. Indeed other tones located in or near either of the clefs may often be notated with advantage by the necessary temporary additions to the other clef.

These temporary additions to the continuous section of the staff are called *ledger lines.* An excessive number of them is confusing to the eye. To avoid this confusion certain abbreviations of the staff are customary, as follows:

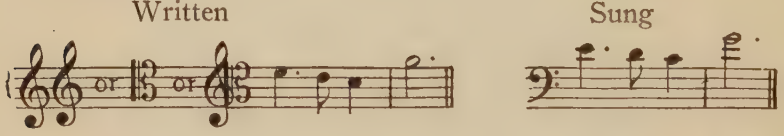
Notes lying far above the clef are writen as in the next lower series of the same names, but with a sign 8

or *8va* ~~ above the staff to indicate their position when sung or played. The wavy line is continued above the staff till the end of the passage thus notated, when a vertical line is drawn toward the staff, or the word *"loco"* is written.

Notes lying far below the staff likewise may be written in the next higher series of the same names, with the sign *8* ~~, or *8va bassa,* below the staff to indicate their real place.



Still another method of notating music for a tenor voice is to borrow the violin clef, writing as if for a soprano, i. e., the notes to be sung in the series below. To indicate this borrowing *sometimes* the clef sign is doubled, or a C clef is falsely put at c^2, or combination is made of a C and G in a new figure for a clef.



A HALF-STEP is the distance from each other in pitch of any two adjacent tones. A WHOLE-STEP is the distance in pitch of any two tones next but one to each other,— the sum of two half-steps.

The staff-degrees B-C and E-F are a half-step apart. The remaining staff-degrees, C-D, D-E, F-G, G-A, and A-B, are a whole-step apart.

A FLAT (♭) is a sign put before any note to indicate that the pitch of the tone desired is a half-step below that

of the degree upon which the note is placed. Originally the flat was a clef, applied to B only, in the way just indicated.

A SHARP (♯) is a sign put before any note to indicate that the pitch of the tone desired is a half-step above that of the degree upon which the note is placed.

A DOUBLE-FLAT (𝄫) indicates that the tone desired is a whole-step below that of the degree on which the note is placed. A DOUBLE-SHARP (×) indicates that the tone desired is a whole-step above that of the degree on which the note is placed.

All of these signs are called CHROMATIC signs.

[NOTE.—It is inaccurate to say that these signs *raise* or *lower* the tone. Each tone has its own pitch. The proper statement is that the chromatic sign serves to notate another tone in the place of that to which the note would naturally have referred.]

A NATURAL, or CANCEL, (♮) is a sign put before a note to indicate that the effect of a previous chromatic sign is annulled,— the tone required is that of the unaltered staff-degree.

Partial cancels of the double-flat are written 𝄫♮; of the double-sharp are written ♮♯.

The OCTAVE is the relationship in pitch between any tone and the thirteenth tone above it, or below it. The tones at the octave have the same letter name. This use of the same name is in recognition of the fact that each of the tones seems physically to be repeating the effect of the lower or higher one.

Within the octave twelve different pitches, a half-step apart from each other, are utilized. With the help of the chromatic signs these twelve tones may be notated in thirty-five different ways. Thus the tone lying between D and E

may be written on three different degrees, as $^{\sharp}$D, $^{\flat}$E, or $^{\flat\flat}$F; the tone G may also be written as $^{\times}$F or $^{\flat\flat}$A. But the tone between G and A permits but two writings, $^{\sharp}$G and $^{\flat}$A.

Different notations of the same tone are called ENHARMONIC writings.

A half-step when written in notes upon the same degree is called a CHROMATIC HALF-STEP. For example, A and $^{\sharp}$A.

A half-step when written in notes upon adjacent degrees is called a DIATONIC HALF-STEP. For example, A and $^{\flat}$B.

EXERCISES UNDER THE STAFF AND ITS USES.

1. Write upon separate slips of paper all of the letter-names of tones from Sub-A to Six-lined C. Then, having put a brace before two staff-sections of a music blank-book and written on them the G and F clefs, draw at random from the slips and write down upon the degree indicated by each letter its note, until all are placed. When notating above c^3 or below great G use the suitable abbreviations with 8~~~ Repeat this exercise until a letter name instantly suggests its proper writing.

2. Consulting now the notations of Exercise 1, name each note over until every notation suggests readily its name. Extend this exercise by naming the notes of printed music until without hesitation all the pitches between Contra-FF and f^4 are located.

3. Using the letter slips from small c up to c^2, repeat the processes of the two previous exercises, writing the notes either upon suitable staff-sections with the C clef, or upon the violin clef as borrowed for a tenor voice-part.

4. In the violin clef notate the chromatic half-steps having as lower tones the following pitches: $^{\flat}$b, d^1, $^{\sharp}f^1$, g^1, $^{\sharp}c^2$ $^{\flat}e^2$, $^{\flat}f^2$, $^{\sharp}g^2$. With the same series of lower tones notate the diatonic half-steps.

In the bass clef notate the whole-steps having as lower tones the following pitches: E, ♭G, ♯A, ♭B, ♭d, ♭e, ♯g, b.

Using the same series of pitches as upper tones notate the whole-steps.

5. Notate all the enharmonic writings in the octave between e^1 and e^2.

LESSON II.

NOTATION OF PITCH: THE SCALES.

Not only does music take account of but few out of the possible pitches of tones, but even among those chosen a given piece usually confines itself to a less number within the octave. This smaller series, set forth in alphabetical order, is called the SCALE. A scale is reckoned from its most important tone, called the KEYNOTE or TONIC, out of which it is supposed to rise.

Music written in a given scale is said to be in the KEY of its keynote.

Not infrequently extra tones, outside the scale proper, are found in a piece. These tones, known as ACCIDENTAL TONES, are felt to be but temporary additions to the scale.

Scales of seven tones, in which each tone has its separate degree, are called DIATONIC SCALES. Scales of twelve tones for which five of the degrees in the octave carry two notes each, are called CHROMATIC SCALES.

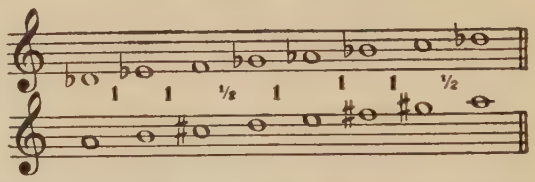
The Major Scale.

The most valuable and widely used scale of modern music is that known as the MAJOR SCALE. It is a diatonic scale of the following construction: From its keynote, which may be any of the twelve pitches, the next tone is a whole-step higher; the third tone a whole-step higher than the sec-

ond; the fourth a half-step higher than the third; the fifth, sixth and seventh each a whole-step higher than the previous one; and the octave a half-step higher than the seventh.

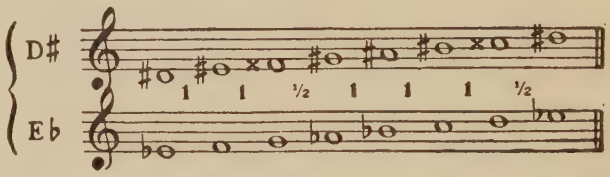
Scale of ♭D:

Scale of A:



The scale of C is the only one that can be notated by the staff degrees, without chromatic signs. Each of the twelve major scales may be written in in at least two enharmonic notations, one of which is usually much simpler to the eye than the other.

Compare these enharmonic scales:



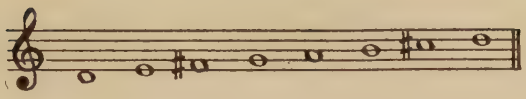
Exercises on the Major Scale.

Write in both the G and the F clefs the following major scales: C. ♯C, ♭C; D, ♯D, ♭D; etc., to B, ♯B, ♭B;—21 notations. Put the chromatic sign at the left of each note requiring it.

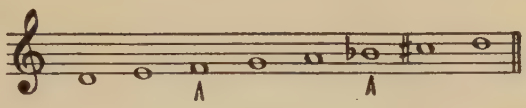
The Minor Scales.

The next form of scale in point of importance is the MINOR SCALE. In modern music it is chiefly used as a contrast to the major, and may be studied by comparison with the latter. It appears in three forms, the first of which is called the HARMONIC MINOR. This differs from the major scale with the same tonic in that its third and its sixth tones are a half-step lower than in the major.

D major:



d minor,
harmonic:



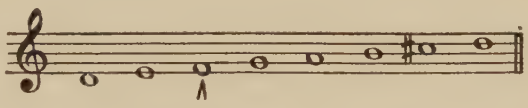
EXERCISES ON THE HARMONIC MINOR SCALE.

Write in both the G and F clefs the following minor scales: c, ♯c, ♭c; d, ♯d, ♭d; to b, ♯b, ♭b,—21 notations; using the proper chromatic signs before each note.

[NOTE.—A capital letter indicates a major scale; a small letter indicates a minor scale.]

The second form of the minor scale is known as the ASCENDING MELODIC, although it is used both in ascending and in descending melodies. It differs from the major scale with the same tonic only in its third, which is a half-step lower.

d minor,
ascending
melodic:

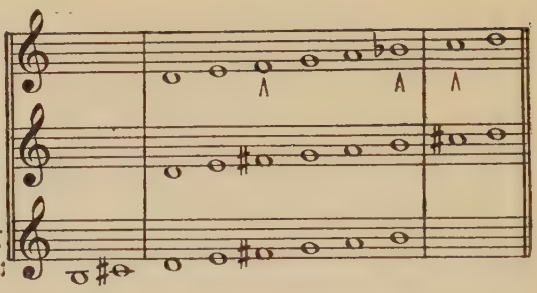


The third form of the minor scale is known both as the DESCENDING MELODIC and as the NORMAL MINOR. It, too, is used in both ascending and in descending passages. It differs from the major scale on the same keynote in that its third, sixth and seventh are each a half-step lower than in the major. The name normal minor is due to the fact that its tones are exactly those of the *major scale whose tonic is the third tone of the minor.* These two scales are called the RELATIVE MAJOR AND MINOR scales.

Descending Melodic, or Normal Minor. Scale of d:

Scale of D Major:

Relative Normal Minor or Descending Melodic: Scale of b:



Exercises on the Melodic Minor Scales.

Write out both forms of the melodic minor scales of c, d, e, f, g, a, b, ♯c, ♯d, ♯f, ♯g, ♯a, ♭b, ♭e, and ♭a.

Structural and Melodic Scales.

Structural scales are scales in which entire compositions may be written. The structural scales of modern music are the major and the harmonic minor. Outside tones come to the aid of these mainly as accidental adornments.

Often the employment of outside tones is so systematic as to practically create new scale-forms. These forms are to be distinguished from structural scales by the character of their harmonies. A good illustration of this is the whole-step scale of six tones, — for example, c-d-e-f-♯g-♯a-c. Its harmonies are far too restricted to make it of more than momentary value as a structural scale; but when used melodically, with harmonies based upon one or more of the major scales, it can be toyed with in interesting ways throughout extended passages.

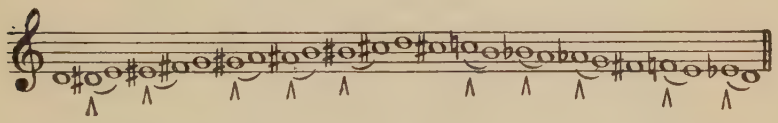
The ecclesiastical modes were the structural scales of music for centuries, and were finally abandoned for the modern and harmonic minor modes. It is interesting to observe that they are being now revived somewhat, chiefly as melodic forms.

The Chromatic Scale.

The scale which uses the entire set of tones within the octave is called the CHROMATIC SCALE. For a long time it has been used, not as a structural scale, but rather as a melodic enlargement of either the major or the minor,—usually of the former. There are some indications, however, that it has capacities as a structural scale. The complete understanding of its significance can come only to one who is familiar with the subject of tonality. Therefore certain very important variations in its manner of writing cannot be treated in elementary theory. But the melodic law of the chromatic element may be stated here, and is as follows:

A chromatic tone is a shading from the previous tone of the structural scale toward the following one. Hence it is unstable and inclines by diatonic half-step progression into the following scale tone. Thus, if ♭A and ♭B are both tones of a given major scale, the chromatic tone lying between them is written as ♮A when it is to move upward to ♭B, and as ♭♭B when it is to move downward to ♭A.

The following notation of the chromatic scale of D (i. e., the melodic enlargement of D major) exemplifies the rule just given. In practise various harmonic considerations may modify the writing:



Notice that by omitting the chromatic tones the scale of D remains, and that each chromatic tone is entered as a chromatic half-step and left as a diatonic half-step.

Exercises on the (Melodic) Chromatic Scale.

Write out in full, according to the rule given above, the chromatic scales of E, ♭B, G, ♭A, and C.

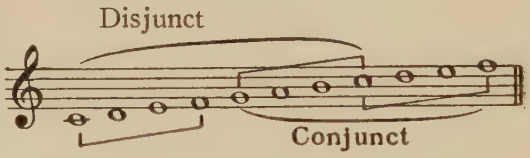
LESSON III.

NOTATION OF PITCH: KEYS AND SIGNATURES.

Relationship of Keys.

The first four notes of the major scale are constructed on the same formula as the last four, namely, two whole-steps and a half-step. This short, four-note scale-group is called a TETRACHORD. In the arrangement of the scale there are two like tetrachords separated by a whole-step. Because of this separation of the tetrachords the scale is called a DISJUNCT scale form. A rearrangement of the same scale with the keynote in the middle gives it the form known as CONJUNCT.

Scale of C:



If now the upper tetrachord of the C major scale be made the lower one of a pair of disjunct like tetrachords the new tetrachord starts on D and includes ♯F; that is, a new major scale is created whose keynote is G, the fifth note of the previous scale, and which differs from this in but one note, the seventh of the new scale.

Disjunct tetrachords:

A similar substitution of tetrachords upon the upper half of the key of G gives rise to the key of D. So a series of keys may be established, each starting on the fifth note of the previous scale. Observe that each scale adds a ♯ to those in

use in the previous scale, and ultimately the scale of ♯B, which has twelve sharps, is reached. Since this last scale is the enharmonic writing of the scale of C major, the series is called the CIRCLE OF FIFTHS.

[NOTE.— The notation of such a circle of keys reveals the defects of our staff system, for in point of sound the circle does actually return upon itself, while in notation it only reaches the adjoining degree.]

In like manner, if the lower tetrachord of the scale of C be joined conjunctly to a like second tetrachord the latter ends on ♭B, and gives rise to the conjunct form of a new scale whose keynote is F, the fourth from the former scale, and which differs from it in but one note,— its fourth. So a series of keys may be established, each starting on the fourth note of the previous scale. Observe that each scale adds a ♭ to those in use in the previous scale, and ultimately the scale of ♭♭D, which has twelve flats, is reached. Since this last scale is the enharmonic writing of the scale of C, the series is called the CIRCLE OF FOURTHS.

Notice that the circle of fifths taken in reverse order, from the key of ♯B, is enharmonic to the circle of fourths and is itself a circle of fourths. For example, the key of ♯B equals the key of C; that of ♯E, the key of F; that of ♯A the key of ♭B; etc. Notice also that the circle of fourths takes in reverse order is enharmonic to the circle of fifths and is itself a circle of fifths. For example, the key of ♭♭D equals the key of C; that of ♭♭A the key of G; etc. Finally, notice that the major scales on the twelve different tones can be notated without the use of more than six sharps or flats; since each scale with a greater number of signs is enharmonic to a scale with a lesser number of the opposite signs.

[NOTE.—The most obvious criticism of staff notation is that simple relationships of tone are made by the notation to

appear strange; for example, the keys of ♭G and B, or of ♯F and ♭D, though lying next each other in the tone circles, through the enharmonic notation are apparently remote. To avoid this unpleasant appearance to the eye composers often prefer to write in keys with seven sharps or flats, and in temporary passages use keys with even more chromatic signs.]

Exercises in the Circles of Keys.

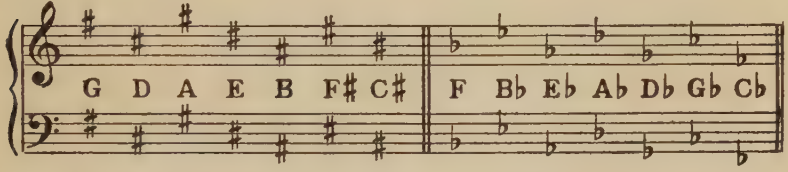
Recite carefully the series of scales in the circle of fifths, noting the number and order of sharps up to the twelve. Recite carefully the series of scales in the circle of fourths, noting the number and order of flats up to the twelve. Repeat these exercises until the scales and their order are familiar. Then practise repeating the enharmonic notations of the scale on each of the twelve different pitches, noting carefully which are the simpler notations. Finally, starting once more with the key of C *write out* the notation of the scales in the order of the circle of fifths, but after the scale with seven sharps is reached continue the series with the enharmonic notation with flats, until the key of C is reached again. Then write out the notation of the circle of fourths, but after the scale with seven flats is reached, continue the series with the notation with sharps until the key of C is reached again. It is important to understand and practise the exercises just given until one can think the major scale on any pitch and in any notation, and can tell instantly the neighboring scales in either direction in the circle of fifths or of fourths.

Signatures of Major Keys.

The SIGNATURE is a grouping of sharps or flats to indicate the tones of the scale in which the music is written. This group is placed at the beginning of each staff, after the clef, and saves the necessity of writing out the sharp or flat before each note that requires a chromatic sign. The order

of sharps or flats in a signature is invariable and is that in which they appear in the circle of fifths and the circle of fourths.

The following diagram of the signatures for the major keys should be mastered in detail, and verified by reciting each scale, as in the previous exercises. In this diagram the chromatic sign above or below a given letter together with all the signs to its left constitute the signature of the key with that keynote:



Notice that each last sharp is the seventh of the scale,—so that the keynote lies a diatonic half-step above the sharp. Also, notice that each last flat is fourth of the scale. Thus, when more than one flat appears the keynote is the next to the last flat.

Exercises on the Signature of Major Keys.

Write out separately in both the G and the F clefs the signatures of each of the fourteen keys here displayed in group. Learn the number and the order of the signs in the signature of each key.

Accidentals.

The sharps and flats of a signature affect every octave of the degree on which they are placed, as well as the degree itself.

Tones that lie out of the scale (accidental tones) require a chromatic sign called an ACCIDENTAL. This must be placed before each note, unless the accidental tone is repeated within the same measure. In this latter case the sign serves as a sort of temporary signature for the measure, but unlike the real

signature it does not affect the octaves. If the true scale tone occurs in the same measure after the accidental, a proper sign is required to indicate the restoration of the scale tone. A tone affected by an accidental, when continued into the following measure by tied notes, does not need the accidental before the second note,— though some writers insert it for the sake of clearness.

Exercises on Accidentals.

Write out the following exercise with the signature of the key of D and the proper accidentals. Repeat it with the signature of the key of ♭B and the proper accidentals:

Write the following exercise with the signature of the key of ♭D; again, with the signature of the key of E:

In a single measure, with the signature of the key of F, notate the melodic ascending and the melodic descending forms of the scale of ♯g.

In like manner, with the signature of the key of ♭D, notate the harmonic minor scales of ♭e, of f, and of g.

Minor Key Signatures.

Minor keys borrow the signatures of their relative major keys (see page 118). But by this signature the seventh of the harmonic minor, and the sixth and seventh of the melodic ascending minor scale are notated too low. When these tones are used they have to be restored to place, therefore, by accidentals. Such a condition of affairs is unfortunate, since each structural scale, whether major or minor, should have a signature of its own by which it can instantly

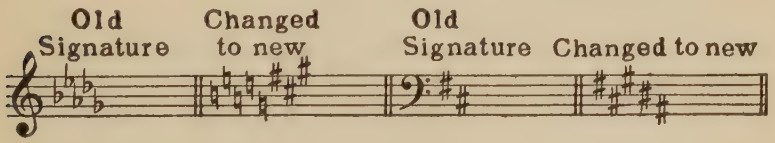
be recognized. With our present notation one is obliged to recognize a minor key by means of its harmonies and by the frequency with which the accidental appears which restores the seventh to place; that is, by inference instead of by direct signature.

Exercises on Minor Key Signatures.

Write in the G and F clefs the signatures of the minor keys of c, ♯c, d. ♯d, ♭e, e, f, ♯f, g, ♯g, ♭a, a, ♯a, ♭b, and b. After each signature write the note for the seventh of the scale and put before it the proper accidental to restore it to its place in the harmonic minor scale.

Change of Signatures.

When, in the midst of a piece of music, the signature is changed, that part of the old signature which is needed no longer must be cancelled before the new signature is written. If this change occurs in passing from one staff to the next, the cancellation and the new signature both appear at the end of the old staff; the new signature alone on the new staff. It is usual, though not imperative, to put a double bar before the change of signature.



Exercise on Change of Signature.

Write in both clefs the change from key of E to key of ♭G.

Write in both clefs the change from key of ♭A to key of F.

LESSON IV.

NOTATION OF PITCH: INTERVALS.

An INTERVAL is the relationship of two tones in pitch according to their writing.

In naming intervals the tone written on the lower degree comes first in order. Thus, C — ♭E means an interval of which C is written lower on the staff; ♭E — C means an interval of which ♭E is written lower on the staff.

Intervals are given a *general name* according to the number of degrees involved, and a *special name* according to the number of half-steps involved. Since each tone has enharmonic notations it is clear that any two tones may be written as several different intervals. Thus ♯F — ♭B, ♭G — ♭B, and ♭G — ♯A, all represent the same tones, but each pair of notes has a different interval name.

General Names of Intervals.

Two tones upon the same degree are a PRIME.

Two tones upon adjacent degrees are a SECOND.

Two tones involving three degrees are a THIRD.

Two tones involving four degrees are a FOURTH, etc.

Two tones involving eight degrees are an OCTAVE. (Compare Lesson I., pages 115 and 116.)

Beyond the octave sometimes the general names are continued — the NINTH, TENTH, TWELFTH, FIFTEENTH, etc.— but more frequently the names of the smaller intervals are repeated. Thus, C — F is called a fourth whether the actual notes are great C — great F, or great C — three-lined f‴.

Special Names of Intervals.

A prime whose tones have the same pitch is a PERFECT PRIME, or UNISON.

A prime whose tones are a half-step apart is an AUGMENTED PRIME. (Compare, chromatic half-step.)

A second whose tones have the same pitch is a DIMINISHED SECOND, or ENHARMONIC UNISON.

A second whose tones are a half-step apart is a MINOR SECOND. (Compare, diatonic half-step.)

A second whose tones are a whole-step apart is a MAJOR SECOND.

A second whose tones are three half-steps apart is an AUGMENTED SECOND.

A third whose tones are a whole-step apart is a DIMINISHED THIRD.

A third involving three half-steps is a MINOR THIRD.

A third involving four half-steps is a MAJOR THIRD.

A fourth involving four half-steps is a DIMINISHED FOURTH.

A fourth involving five half-steps is a PERFECT FOURTH.

A fourth involving six half-steps is an AUGMENTED FOURTH.

A fifth involving six half-steps is a DIMINISHED FIFTH.

A fifth involving seven half-steps is a PERFECT FIFTH.

A fifth involving eight half-steps is an AUGMENTED FIFTH.

A sixth involving seven half-steps is a DIMINISHED SIXTH.

A sixth involving eight half-steps is a MINOR SIXTH.

A sixth involving nine half-steps is a MAJOR SIXTH.

A sixth involving ten half-steps is an AUGMENTED SIXTH.

A seventh involving nine half-steps is a DIMINISHED SEVENTH.

A seventh involving ten half-steps is a MINOR SEVENTH.

A seventh involving eleven half-steps is a MAJOR SEVENTH.

A seventh involving twelve half-steps is an AUGMENTED SEVENTH.

An octave involving eleven half-steps is a DIMINISHED OCTAVE.

An octave involving twelve half-steps is a PERFECT OCTAVE.

An octave involving thirteen half-steps is an AUGMENTED OCTAVE.

The Major Scale as a Measure of Intervals.

With the keynote as lower tone the interval names of the major scale are: *perfect prime, major second, major third, perfect fourth, perfect fifth, major sixth, major seventh, perfect octave.*

Any interval of a given *general* name, if a half-step larger than a perfect or a major interval of the same name, is an augmented interval of that name; if a half-step smaller than a major interval is a minor interval; if a half-step smaller than a perfect or than a minor interval is a diminished interval. Any interval of a given *general* name, if a half-step smaller than a diminished interval is a DOUBLY-DIMINISHED INTERVAL; if a half-step larger than an augmented interval is a DOUBLY-AUGMENTED INTERVAL.

It is often easier to reckon an interval by comparing it with the major-scale interval upon the lower tone as keynote, than it is to observe the number of degrees and of half-steps involved. Thus, the interval $^{\flat}$D — B is quickly seen to be a half-step larger than the major-scale interval $^{\flat}$D — $^{\flat}$B in the scale of $^{\flat}$D, hence it is an augmented sixth.

The habit of reckoning in terms of a scale is a valuable one, since freedom in harmony depends upon absolute familiarity with all scales. Hence, even where it is not easy to reckon the interval in terms of a scale on its lowest note, the same method may be used. Thus the interval $^{\times}$F — $^{\flat}$E, though difficult to locate from the scale of $^{\times}$F, may be measured by the scale of $^{\sharp}$F. The $^{\sharp}$F — $^{\flat}$E being a dimin-

ished seventh, the interval sought, $\times F - {}^{b}E$, is seen to be doubly-diminished by the loss of the chromatic half-step ${}^{\sharp}F - \times F$.

Consonant and Dissonant Intervals.

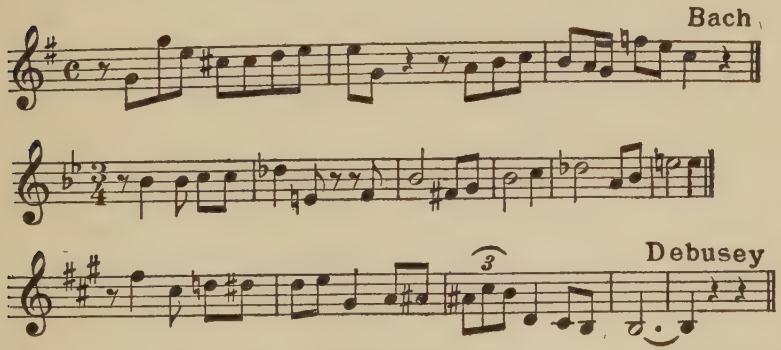
Intervals also are classed as CONSONANT, or restful intervals, and DISSONANT, or unrestful intervals. The reason for this classification will appear later in these lessons when discussing the harmonic chord of nature.

The consonant intervals include all the perfect intervals, sometimes called the PERFECT CONSONANCES, and major and minor thirds and sixths, sometimes called the IMPERFECT CONSONANCES.

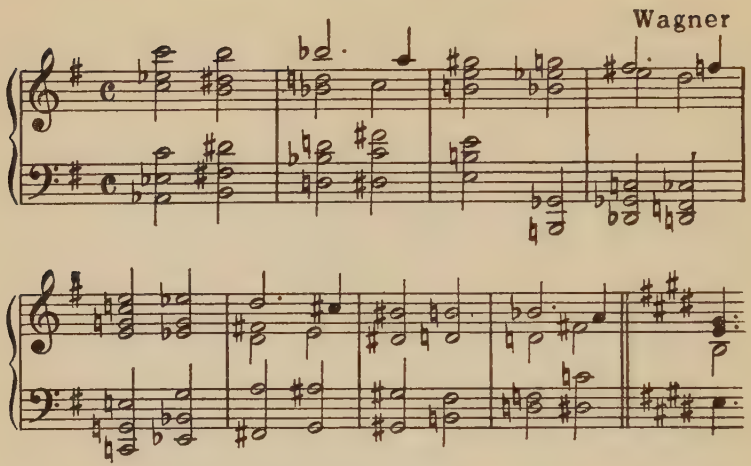
The dissonant intervals include all the remaining intervals; that is, all seconds and sevenths, all diminished and all augmented intervals.

Exercises on the Names of Intervals.

Name the intervals between each note and the next in the following melodies:



Name the intervals between each note and every one above it in the following chords:



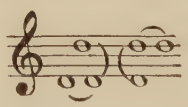
Extend this exercise by practise with printed music until completely familiar with the looks of every interval commonly used.

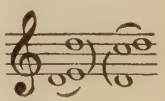
Construct complete tables of dissonant intervals on the notes ♯F, ♭D, E, and F.

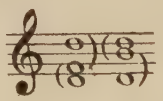
Inversions.

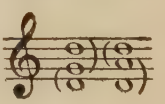
When an interval is less than an octave the remainder of the octave forms a complementary interval called its INVERSION. The inversion has the same letter name as the original interval, but in reverse order; that is, the inversion of C — ♭E, a minor third, is ♭E — C, a major sixth.

The complementary intervals are:

PRIME AND OCTAVES: 

SECONDS AND SEVENTHS: 

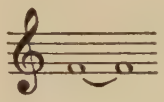
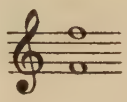
THIRDS AND SIXTHS: 

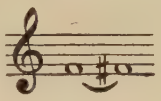
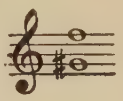
FOURTHS AND FIFTHS: 

The *complements* or *inversions* of all *major intervals* are *minor;* of all *minor intervals* are *major;* of all *augmented intervals* are *diminished;* of all *diminished intervals* are *augmented;* of all *perfect intervals* are still *perfect;* of all *consonant intervals* are still *consonant;* of all *dissonant intervals* are still *dissonant.*

Exercises on Inversions.

Write out a complete table of inversions with musical illustrations, as follows:

The inversion of a perfect prime  is a perfect octave: 

The inversion of an augmented prime  is a diminished octave:  etc.

LESSON V.

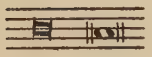
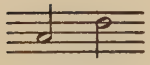
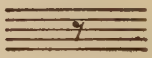
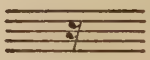
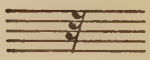
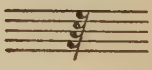
NOTATION OF DURATION.

Relative Duration.

Notes, which by their positions on the staff notate pitch, by their various shapes also indicate the relative length of tones. A corresponding and equally exact notation of the relative length of silences is given by the symbols called rests.

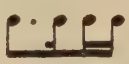
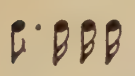
The following table on the next page shows the notes now in use, their names and their comparative values. In this table each symbol is equal in duration to two of the symbols next below it:

Table of Notes and Rests.

Notes.	*Names.*	*Rests.*
	Breve, or Double-whole.	
	Semibreve, or Whole.	
	Half.	
	Quarter.	
	Eighth.	
	Sixteenth.	
	Thirty-second.	
	Sixty-fourth.	

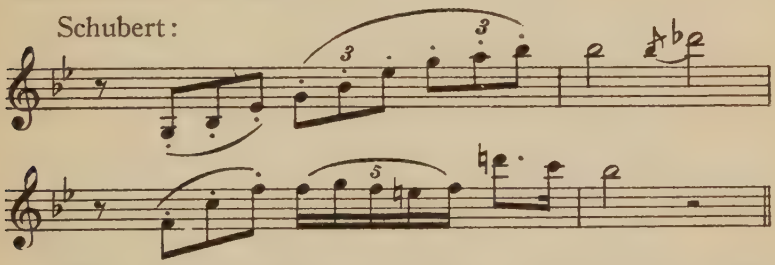
Observations on the Writing of Notes.

The parts of a note are the *head* (𝅝 or 𝅗𝅥), the *stem* (|) and the *hook* (♪). Stems of notes are written upward from the right side of the head or downward from the left side. Separate hooks are always written on the right side of the stem slanting toward the head. (See the table and other illustrations.) Eighth notes and notes of lesser value are frequently grouped by straight lines connecting their stems, in lieu of their hooks.

instead of or  instead of 

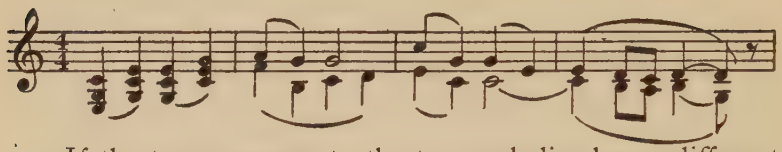
When but one melody is written on the staff, up-stems are used for notes below the middle line and down-stems for notes above the middle line; except where a number of notes have their hooks united, in which case the predominance of the notes above or below the middle line decides the stem-direction for all.

Schubert:



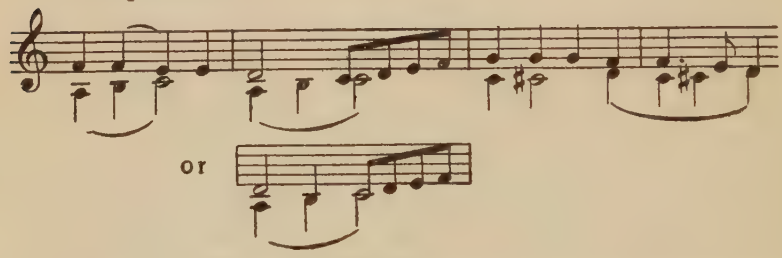
When two melodies are writen simultaneously on the same staff, the upper melody uses up-stems; the lower, down-stems; and a note common to both melodies takes both stems. Yet when two or more notes *of equal time-value* are written on the same staff a single stem can often suffice for all, the predominance of notes above or below the middle line determining the direction of the stem. Thus,

Humperdinck:



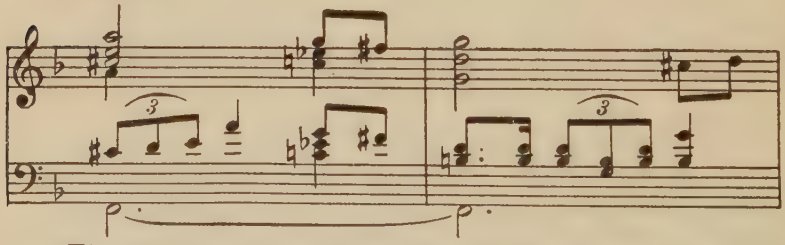
If the tone common to the two melodies has a different length in each, though beginning to sound at the same instant, either a single note is used with a head corresponding to the longer tone and stems indicating the divergence in length, or separate notes are used for each melody, but they are crowded together to indicate that they begin sounding sinultaneously, as thus,

Humperdinck:



Notes of different pitch that begin to sound simultaneously are always, if possible, placed in the same vertical line; for example,

Goldmark:



The rule just given, that notes which begin sounding simultaneously stand in vertical line, cannot be applied in several cases, namely:

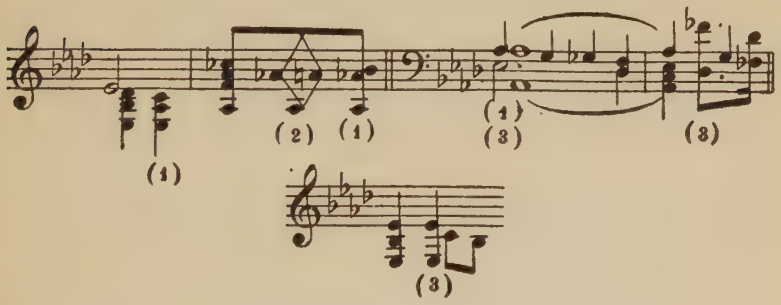
1. Notes on adjoining degrees must stand a trifle out of line.

2. Notes of different pitch on the same degree must also be out of line.

3. Notes of different lengths requiring separate heads or stems must often lie out of line (recall what has just been said of a tone common to two melodies).

The following interesting excerpts from a Jensen song-accompaniment illustrates the above exceptions:

Jensen:



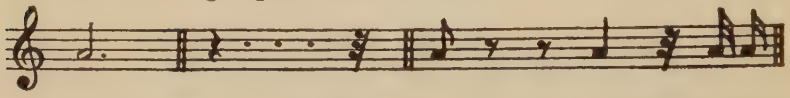
These exceptions, and occasionally others which are readily recognizable when they occur, make it necessary when reading music to determine in each case the moment of the entrance of a sound by the place it holds in its own melody, consulting to this end the value of the preceding note or notes in the measure.

A dot placed after a note or rest adds to its length half its value again (𝅗𝅥. = 𝅗𝅥 + 𝅘𝅥). A second or third dot adds again half the value of the preceding dot (𝄽.. = 𝄽 + 𝄾 + 𝄿).

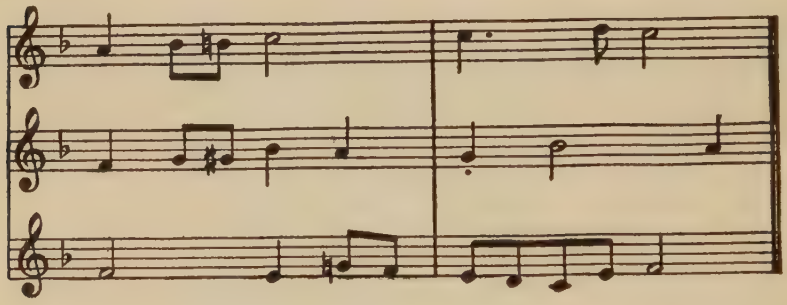
Exercises in the Value of Notes and Rests.

1. Give the name of every note and rest used in the musical illustrations of these lessons. Practise farther with printed music until the sight of any note suggests at once its name and time-value.

2. Write out the equivalents in eighth notes or rests of the following signs:



3. Write on a single staff the three melodies given below:



Absolute Duration: Tempo.

Much of the music written in the past and present has no exact, absolute time-value assigned to any given note, from which all others may be determined; for, within certain limits, musicians can easily recognize how fast or how slow a composition should move. It is, however, customary to write at the beginning of a piece a descriptive word or two which gives an approximate time-value to the notes. This word or phrase is called a mark of TEMPO, or MOVEMENT. It announces either:

1. The tempo alone; as *lento, adagio, moderato, presto,* etc.;

2. The tempo and the character of the music; as *largo, grave, andante, maestoso, animato, vivace, allegra,* etc., or

3. The resemblance of the piece to some well-known form of composition, from which tempo and character are to be inferred; as *tempo di menuetto, alla marcia, alla polacca,* etc.

Derivatives of many of these words are in common use, as *allegretto, andantino, prestissimo,* etc. Also, they are frequently modified by limiting words, as *andante con moto, adagio non troppo,* etc.

With the tempo-mark there is often found an additional sign of absolute duration, namely, a note coupled to a figure, which states the number of such notes that may be played in a minute. Thus: (♩. = 104, or 𝅗𝅥 = 69). Such a sign is called a *metronome-mark,* from the instrument called a metronome, the pendulum of which, being set according to a graduated scale, can be made to move any required number of swings per minute, and so indicate the absolute time-value of the given note.

Modification of Tempo.

But the expression of musical thought also demands a certain amount of flexibility in hastening or retarding the movement of the music during the course of performance. Notation of these changes is likewise made by use of words set at the required places about the music. For example: *più mosso, meno mosso, accelerando, stretto, stringendo, ritardando, rallentando, a tempo, tempo primo, doppio movimento, l'istesso tempo, tempo rubato, senza tempo,* etc.

[Note I.—All the signs cited above are Italian words. Modern writers occasionally use for these purposes German, French or English words, the tendency being for each musician to write in his own language. There is, however, such a complete acceptance of certain Italian words that they

will undoubtedly always continue in use by writers of whatever nationality. *This is decidedly desirabble; for a notation to be perfect must be* FIXED *and* UNIVERSAL.]

[NOTE II.—The material given in this lesson does not purpose to be exhaustive, only sufficient statements to fully classify the notation-symbols can be presented. For the meaning of all words or signs used in music, but not given here, or stated but not explained, the student is referred to the Dictionary of Musical Terms. It should be insisted upon that every student have this dictionary always at hand, and never allow a word or sign in the music he is studying to pass unexplained.]

EXERCISES ON TEMPO MARKS.

1. Make a table of all the tempo marks used in this lesson, and add to each word or phrase its English translation.

2. Read over the tempo marks in pieces of printed music, and add all the new marks found there to the table previously made.

LESSON VI.

NOTATION OF DURATION.

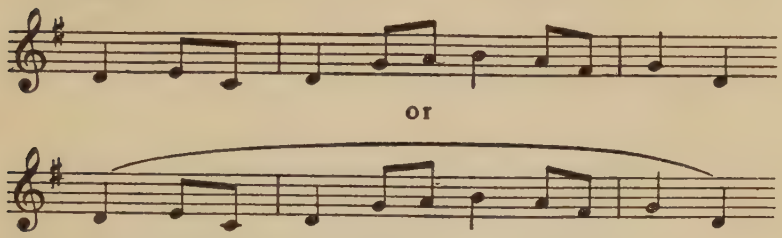
SPECIAL NOTATIONS.

DELIVERY OR TOUCH.—The notation of DELIVERY or TOUCH avoids the necessity of rests of special lengths, or an excessive employment of rests. The treatment of touch is as follows:

When tones succeed each other without gap the effect is said to be LEGATO. No signs are positively required to indicate legato, yet frequently one is employed, namely the SLUR.

This is a curved line drawn from the first to the last of the notes that are to be delivered without break of silence. Thus,

Bach:



are equally to be played legato.

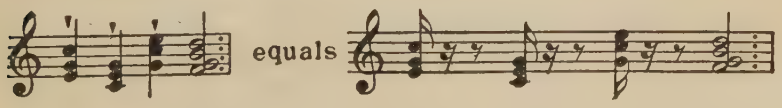
When tones slightly overlap each other the effect is said to be LEGATISSIMO. This is a special pianoforte device, and is notated by the word itself written at the beginning of the passage which is to be played in this fashion.

When tones are slightly detached from each other, the delivery causing an instant of silence between each tone and the next, the effect is said to be NON-LEGATO. Its notation is the word itself written at the beginning of the passage. Such non-legato detachment is always required, also, between the end of a slurred passage and that which follows.

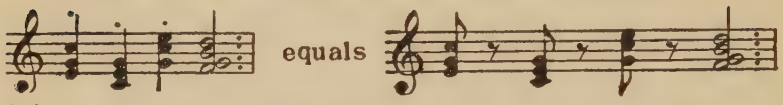
When tones are still more sharply detached the effect is called STACCATO. Here, but for the clumsiness in the notation, which would result, one might instead use shorter values of notes alternating with rests.

Staccato effects are of different grades, which are notated respectively (1) by points over and under the notes, (2) by dots, or (3) by dots and slurs. With due allowance for the rapidity or general character of the music the effects may be roughly classified as follows:

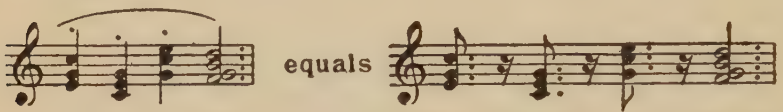
1. The point takes from the note three-quarters of its value. Thus



2. The dot takes from the note half its value. Thus



3. The dot and slur takes from the note a quarter of its value. Thus

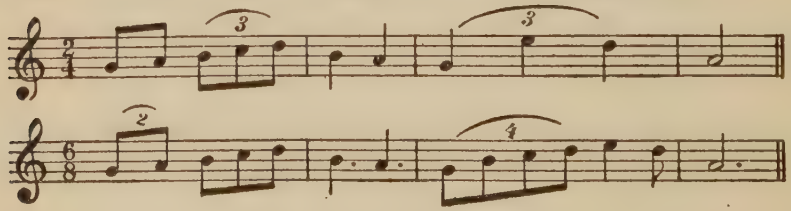


This last effect is called MEZZO-STACCATO and requires a suggestion of legato, yet plainly a detached delivery of the tones. How to play a good mezzo-staccato is an important problem of pianoforte technic.

IRREGULAR NOTE VALUES.

Sometimes it is desirable to divide the value of a given note by three, or to put four or five notes of equal value in the time regularly taken for three. These and other special lengths of tone are indicated by the notes nearest in value to that required, with a slur and a group-figure that specifies what is required. This in most cases causes the value of the note used to be shortened, but sometimes it extends its value.

Thus, the first measure in the following parallel examples indicates a contraction of the last three notes in the upper example and an expansion of the first two in the lower. The two illustrations, in their respective third measures, both show contractions in the value of the notes:

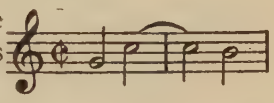


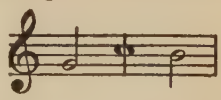
The names given to such contracted or expanded groups are, according to the number of notes involved, TRIPLETS, QUADRUPLETS, QUINTUPLETS, etc. (See articles in the Dictionary for further information.)

The Tie.

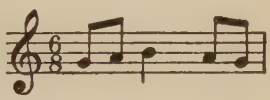
The TIE is a curved mark similar to a slur used to connect two notes of the same pitch and to indicate that the two notes represent but one tone. The following cases occur where a tone must be written as two notes tied:

1. When the tone is longer than a given note but as long as the dotted note. Thus has only the notation

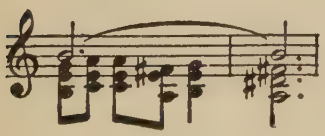
2. Where a tone lies partly in one measure and partly in the next, thus  Here c^3 is but one tone.

[NOTE.—But Brahms sometimes, following the example of mediæval writers, wrote such a tone as a single note across the measure-bar, in this way: 

The same rule is sometimes made to include that of rhythmical divisions within the measure; but such application has some very common exceptions which will be considered later. An illustration of the rule is as follows: Thus

is correct, and  is not

3. When a clearer notation is produced in this way: Thus

 is better than

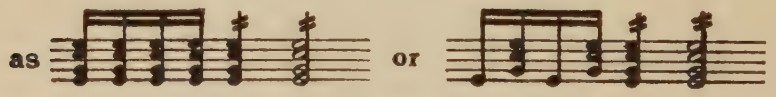
The Tremolo.

The direct opposite of the tie, where two notes are required for one tone, is the TREMOLO, where one note is made to serve for a series of rapid repetitions of the same tone.

The notation of this is the use of straight hooks drawn across the stem of the note, the number of hooks indicating the value of each repetition-note.

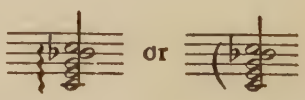
A simultaneous tremolo of several notes on the piano for the same hand is played by striking alternately higher and lower tones.

Where there can be any doubt as to whether such simultaneous repetitions upon the piano are to be played as a tremolo or not, a portion of the effect is often notated in full, to serve as a model for the whole;



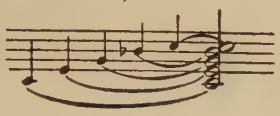
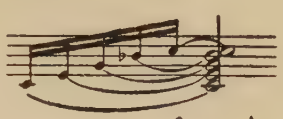
Broken Chords, or Arpeggios.

A series of tones struck rapidly in succession from lowest to highest, but then continuing to sound sinmultaneously, may be written in vertical lines, with the roll-mark, thus

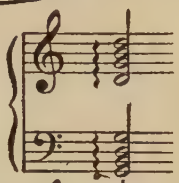


The broken-chord effect, especially when it is somewhat deliberate, is occasionally written in small arpeggio notes,

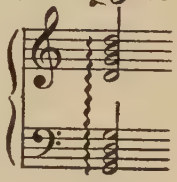
which are then connected by ties to a vertical writing in full-sized notes,

thus  or 

On the pianoforte simultaneous broken chords may be made with the right and left hand, thus



Hence, of the single continuous roll is desired, care must be taken to make the roll-mark continuous, as



Octave Abbreviation.

A passage to be played in octaves may be written as a single melody, with the sign ***coll' 8va*** ~~~ , signifying that both the melody as written and the octave above it are to be played; or ***coll' 8va bassa*** ~~~ signifying that the melody and the octave below it are to be played.

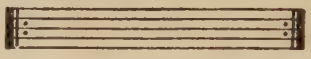
The Pause or Hold.

The sign 𝄐 calls for a halt in the progress of the music. Over or under a note it prolongs all the tones sounding at the moment the note would otherwise end. Over or under a rest it prolongs the silence. Over or under a bar it detaches the music before the bar, by a silence, from that which follows.

No definite rule for the duration of a hold can be given except that it conforms to some rhythmic unit or group of units.

Repetition.

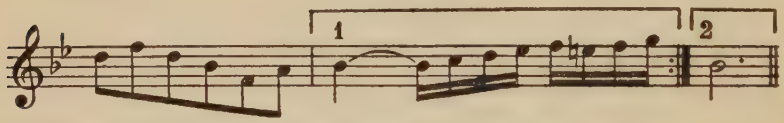
Any portion of a composition may be repeated by drawing a DOUBLE BAR at its beginning and end, with dots after the first double bar and before the second, thus:



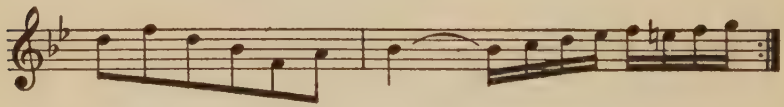
When the repeat is from the beginning of the music, the first double bar and dots are not needed.

If in the repetition the last measure or two is to be excluded and others substituted, a horizontal line is drawn over the excluded measures, before the double bar, and the phrase *la prima volta* (first time), *1ma*, etc., or simply *1*, is written; while over the substituted measures, after the double bar, a similar line and the phrase *la seconda volta* (second time), etc., appears. For example,

Bach:



indicates that for the first time one should play



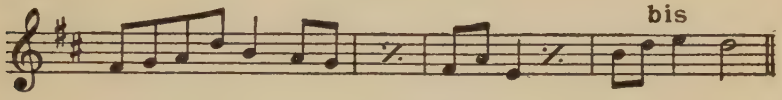
but on the repeat:

If at the beginning of a composition it be desired to repeat some or all of the first part, the words *da capo* (from the beginning), abbreviated *D. C.*, are used, with a designation of how much is to be repeated. For example, *D. C. al* 𝄐 means "repeat from the beginning to a double bar having over it a hold"; *D. C. al fine* means "repeat from the beginning to the word fine (end)"; *D. C. al* 𝄋, "repeat to the sign."

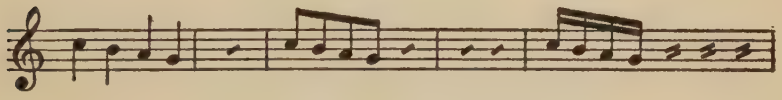
If the repeat is not from the beginning, the expression *dal segno,* requiring repeat from the sign 𝄋, or *dal segno al segno,* " from the sign to the sign," may be used.

Repetitions of short groups in printed music are usually written out in full; but somewhat rarely (more frequently in manuscript), the following signs are found:

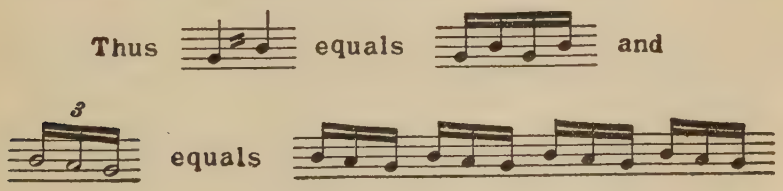
When all the notes of a single measure, or portion of a measure, are to be repeated, a single slanting line, with a dot above and below 𝄎 or the word *bis* written above the group to be repeated, will suffice to indicate the repeat, thus:



If all the notes repeated have the same time-value, the dots in this sign may be omitted, the single line being used if the notes are eighths or longer notes, while for notes of less time-value the number of lines corresponds to the required note-value, thus:



Occasionally, when such repetition group has but two or three tones of little time-value, the figures are written out in notes each of which would occupy the whole time, but with hooks joined to the notes in such a way as to indicate the actual tone-values to be played and repeated.



Ornaments.

The remainder of the special notations to be referred to are usually classed as signs of ornamentation, the effects for which they call being regarded as "graces" to the music.

There is a division of opinion among musicians as to the manner in which many of these signs are to be played; the issue being whether the grace-notes in question should take their time of performance from the note with which they are written, or from the note or rest preceding this. This division is in reality a conflict as to the purpose and value of ornamentation in music.

The theory which is historically the earlier, and was apparently universal in the days of Bach, and even later than Mozart, assumes that graces are, for the most part, a rhythmic as well as a melodic variation of the music to which the graces are added; the alteration of melody being heightened by the piquant irregularity brought into the rhythm.

It may be said in behalf of this theory that the music of the periods which used these signs the most has a freedom of rhythm quite in accord with such a conception, while the musical instruments were then at a stage of development which would naturally give rise to such effects.

The contrary theory asserts that graces are but delicate adornments of music, disturbing neither the onward flow of rhythm nor of melody.

Inasmuch as classic writers have usually been fully committed to the one or the other theory, the use of graces which each composer makes must be studied in the light of his own history.

One admirable result of the conflict is, that modern writers, in order to express themselves unmistakably, are

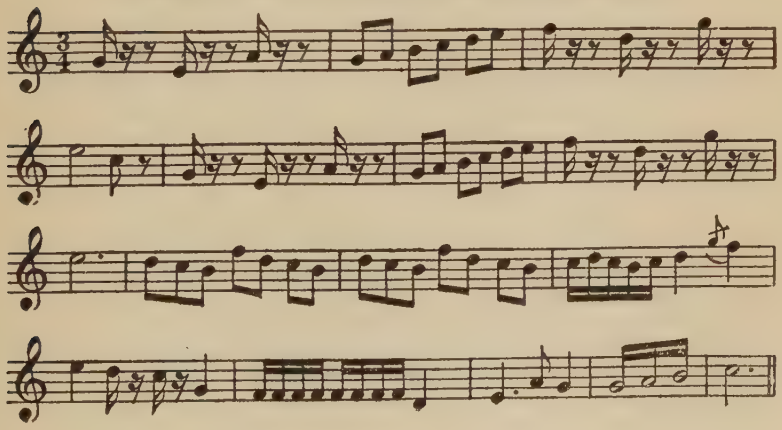
being forced to abandon most of the old signs, and write everything out in full. Moreover, the conception that grace notes are the delicate traceries in music has led composers to put the special ornaments based on this view, into smaller notes than the rest of the music, such notes to be played without disturbing the rhythmic onflow, and frequently also more lightly than the rest.

The principal signs to be found in classic and modern music are the *mordent* ; the *pralltriller* (inverted mordent, , the *turn* , the *trill* or *shake* *or tr* the *long* and *short appoggiatura,* and the *double appoggiatura.*

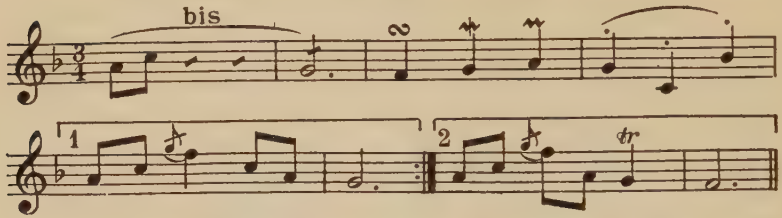
For definition of these words, and instructions as to their performance, consult the Dictionary of the American History and Encyclopedia of Music, or the judgment of teachers, since there is no universally recognized authority in the matter. See, for an exhaustive study of the subject, "Musical Ornamentation," by Edward Dannreuther.

Exercises in Special Notations of Duration.

1. Simplify and correct the following passage:



2. Write out in full the following condensed passage:



3. Look up and write out the definitions of all words in this lesson not already explained.

LESSON VII.

NOTATION OF FORCE AND OF COLOR.

Notation of Force (Dynamics).

Notation of dynamics in music is of two distinct sorts:

First.—General expression of force.

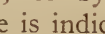
Second.—Indications of accent, connected directly or indirectly with rhythm.

General Dynamics.

The sounds in music are of varying degrees of force, the music being or becoming louder, or being or becoming softer at one time than another; part of the tones which sound at a given moment having, it may be, greater stress than the remainder, etc.

The notation of these gradations in force is by the use of letters, words or signs, placed in and about the music.

From softest to loudest, the letter-abbreviations in common use are: *ppp, pp, p (piano), mp (mezzo piano), mf, f (forte), ff* and *fff.* The effect called for by any of these letters is assumed to continue until contradicted by some new sign.

A gradual increase of force is indicated by the word *crescendo, cresc.,* or by the sign A gradual decrease of force is indicated by the word *diminuendo, dim.,* or by the sign  Both of these words are frequently modified as *poco a poco cresc.,* or *molto dim.,* etc.

Sudden force on a single tone or chord is indicated by *sf, sfz, fz,* ∧ or ∨ (all standing for the word *sforzando*). When a single tone thus emphasized decreased instantly piano, the letters *sfp* are used.

A series of sforzando notes in a single melody may be indicated by the words *marcato, marcatissimo;* an entire passage thus emphasized by *rfz (rinforzando).* An extremely heavy pasage of sforzando effects may be marked *martellato.*

Legato passages for the piano, having tones to be made full and prominent but not to be sharply struck, may have a short horizontal mark, thus: drawn over the notes in question, or may use the word *tempo.* The word *pesante* calls for still more weighty effect of the same sort.

Non-legato notes use for the same purpose the mark and dot, thus:

A number of words that primarily refer to tempo are found so certainly to involve also a dynamic change that the accompanying sign of force is usually omitted, it being implied in the tempo indication. For example, the following words are commonly felt to have this double sense: *stringendo* (equals *accelerando e crescendo), rallentando* (equals *ritardando e diminuendo),* and *allargando* (equals *ritardando e piu forte).*

Accent.

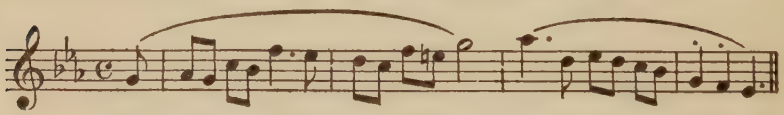
In music as in speech there is constant interplay of more or less prominence given to the tones as they succeed each other. The more prominent tones are termed ACCENTED tones. Accents are of two sorts, special accents and rhythmic accents.

Special accents lay stress on the tones by added force, but are unconnected with the idea of time. They are notated, whenever they occur, by the sforzando mark, as is indicated in the previous paragraph.

Rhythmic accents are involved in the problem of the grouping of time-units (commonly called beats or pulses). This grouping is accomplished by the regular recurrence of accented beats. It must be noticed, however, that rhythmic accents are not necessarily or always brought about by stress due to loudness of tones. The extra length of tones beginning on the beat, or an important chord, can serve equally well to give accent. The notation of rhythmic accents is connected with the treatment of rhythm itself, and can best be discussed under the latter head.

Exercises in the Notation of Dynamics.

1. Indicate by signs (not words) the fact that the following melody should begin softly, increase gradually to its most important note, and then suddenly become soft, after which it is to die away to the softest possible tone:



2. Read the signs of force placed about in printed music until these signs suggest at once the treatment of the music required thereby.

3. State what sort of accents depend wholly upon force. What depend partly upon force. How can accent be indicated without any special stress?

Color.

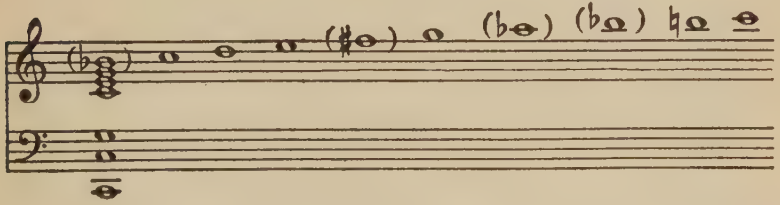
Timbre, or color, often called quality, is that characteristic of musical sounds which makes the violin tone differ from the flute tone, the human voice from the trumpet, etc.,

although in pitch, length and force the sounds utered be identical. A thorough understanding of this would call for a complete study of acoustics — the physical basis of sound. For the purpose of musical judgment and knowledge of color effects, the following statements may be sufficient:

Color in a Single Tone.

What is ordinarily recognized as a single tone is, almost without exception, in reality a group of sounds of different pitch, making a composite tone. The composite consists of either the whole or some portion of the following series; namely, a lowest sound, called a *fundamental,* which is the only pitch we usually notice, and after which we name the tone; and, in addition, a large number of higher sounds, called *overtones, upper partials,* or *harmonics,* which are related to the lowest, as, in the example below, the higher tones are to the tone C. The complete composite tone is called the HARMONIC CHORD OF NATURE.

[Note.—The illustration presents the composite tone of great C, carried up as far as c^5. The tones represented by bracketed notes are decidedly out of pitch in our scale system, while several of the others are slightly falsified by the tempered scale.]



Under usual circumstances the fundamental of the group is by far the loudest sound, the others rapidly decreasing in volume as the series ascends. The difference in color which the same tone has when produced on different instruments

is due either to the presence or absence of certain of these upper partials (that is, to the completeness of the composite), or to variation in the force of some of the partials. Instruments which have few and low upper partials predominating give a smoother tone, while instruments which have many and high partials predominating give a more incisive tone.

The Educating Influence of the Harmonic Chord.

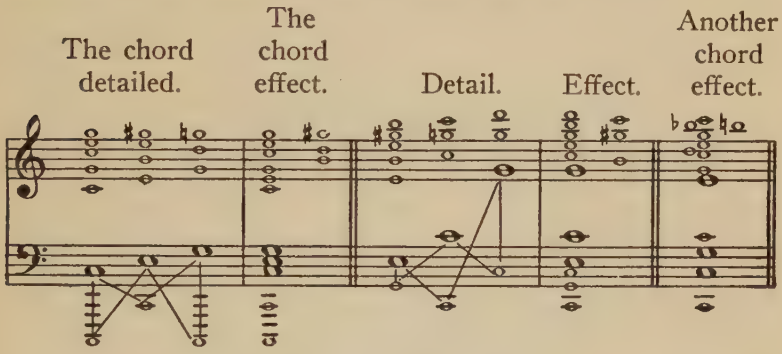
A large number of the laws of simple harmony and of melody are based on the unconscious education of the ear by the harmonic chord of nature. That is, many of the effects of harmony, which practical musicians have recognized as good, already appear in miniature in the harmonic chord. It must, however, be remembered that the molding power of the chord has been historically, and must be practically, limited by the sensitiveness of the unaided ear to harmonic effects in the chord and in music. Attempts to justify rules of harmony from the presence in the harmonic chord of extremely high and feeble partials, must be fallacious. The judgment of musicians as to color effects is almost invariably instinctive. The thing they pronounce good will later be demonstrated to be so, but they cannot tell why at the time.

Color in Combinations of Tone.

When tones are combined in chords, since each tone is a composite, the chord as a whole produces a new color which varies greatly according to the actual tones used, the color of each single tone, etc. This is the more complicated, because a chord actually creates certain tones (resultant tones) lower than any of the fundamentals in the chord; i. e., sounds which were not present in any single composite tone.

The smoothness or harshness of a chord, however, is found to depend upon the same general characteristics as in the case of a single tone.

That is, chords in which the upper partials of the single tones unite to emphasize in the main the lower partials of the combined series will be smooth and rich; while chords in which the upper partials conflict or emphasize the higher partials of the series will be brilliant or harsh.



Notice that of the chords here given, those whose tones are at greater distance from each other, and whose tones are higher in pitch, are smoother in effect.

Composers are able to take skilful advantage of this fact, either to increase a feeling of unrest in their music, or to create a delightful sense of restfulness.

The harshness or smoothness of any chord can likewise be intensified by the use of instruments which emphasize those partials that will produce the desired effect, or which omit those partials that would hinder the effect. Thus the varying purposes of the music are heightened by skilful use of color in instruments. It is this which lends much richness and diversity to orchestral music.

Notation of Color.

Notation of color is therefore seen to consist of two things: first, the choice of chord-tones; second, the choice of instruments.

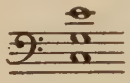
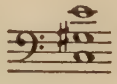
The first is involved in the make-up of the music as a whole. The second is what is called SCORING of the composition — for human voices, orchestra, band, organ, piano — one or all of these.

EXERCISES ON THE NOTATION OF COLOR.

[NOTE.—It is difficult to present exercises based on so brief a statement of color as that in the preceding paragraphs. The following questions may prove suggestive:]

1. Why do chords played in the middle register of the pianoforte (c to c^2) sound well in a close arrangement, while those played below c seem blurred and dull, and those above c^2 seem thin?

2. Why does the music of a male quartet sound richer than that of a female quartet?

3. Why does the chord  sound restful but the chord  sound unrestful?

LESSON VIII.

RHYTHM: ACCENT GROUPS.

RHYTHM in music is the orderly marshaling of the units, and of groups of units. It is the element of unity in time upon which all proportion depends.

Abstractly stated, *it is the grouping of time into regular successions of time-periods by the recurrence of identical or of similar phenomena.*

Time-units are grouped by the regular return of accent into ACCENT GROUPS (or MUSICAL METERS).

ACCENT GROUPS.

Accent groups are either simple, compound or mixed (complex).

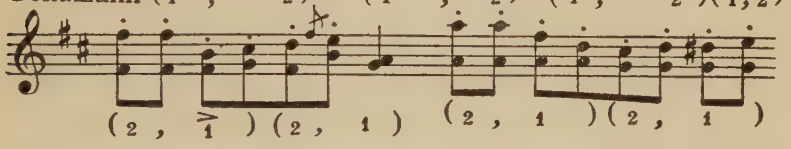
SIMPLE ACCENT GROUPS have but one accent to the group, and are usually made of two, of three, and rarely, in quick tempo, of four beats.

Simple accent groups have, then, the following group forms (using the numeral I. to indicate the accented beat):

Group by twos, either (1, 2) (1, 2) or (2, 1) (2, 1):

Mendelssohn

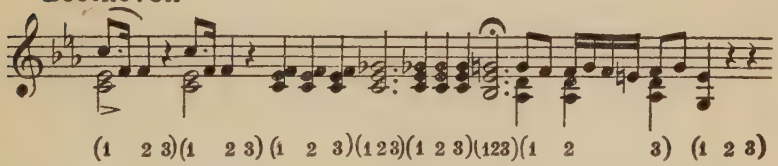
Schumann (1 , 2) (1 , 2) (1 , 2)(1,2)



(2 , 1) (2 , 1) (2 , 1)(2 , 1)

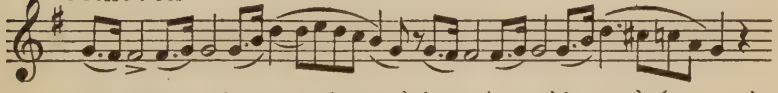
Group by threes, (1, 2, 3) (1, 2, 3) or (3, 1, 2) (3, 1, 2) or (2, 3, 1) (2, 3, 1).

Beethoven

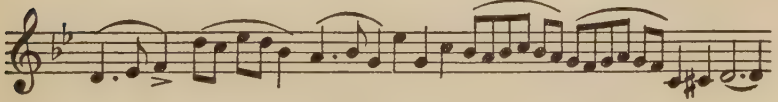


(1 2 3)(1 2 3) (1 2 3)(123)(1 2 3)(123)(1 2 3) (1 2 3)

Beethoven

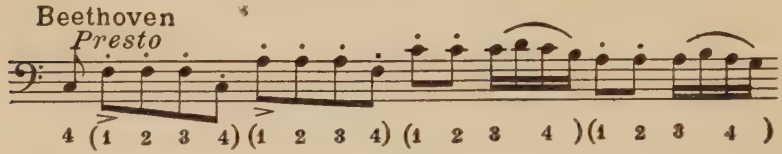


(3 12)(3 12)(3 1 2) (3 1 2) (3 12)(3 12)(3 1 2) (3 1 2)



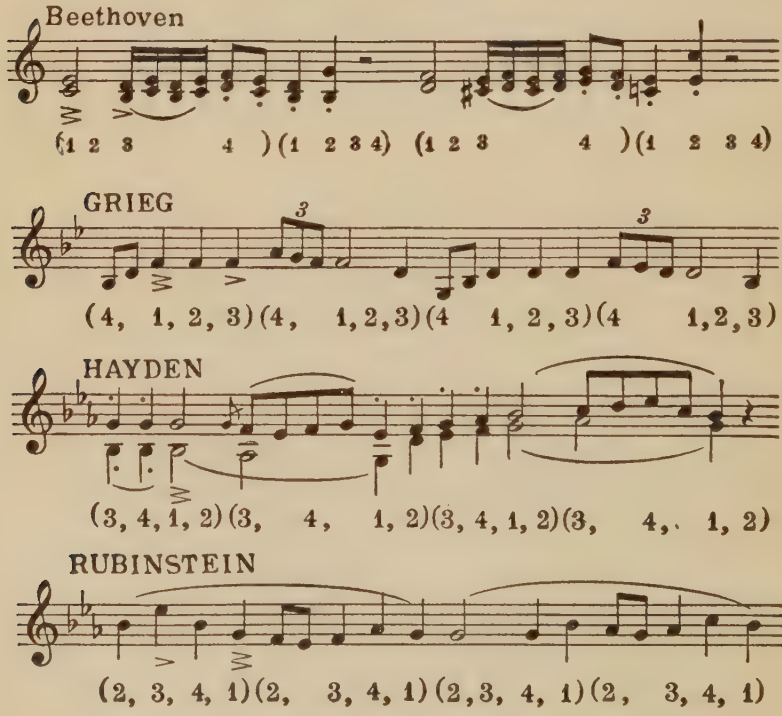
(2 3 1)(2 3 1)(2 3 1)(2 3 1)(2 3 1) (2 3 1)

Group by fours; such groups, through rare, reveal themselves in the rapid tick-like beats and single accent:



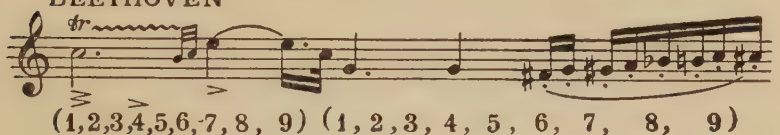
Compound accent groups have two or more accents of different degrees of importance to the group. They are to be thought of as a grouping of the simple groups by means of added stronger accents.

Thus, two groups of simple twos combine to a compound of four with the following possible variants:

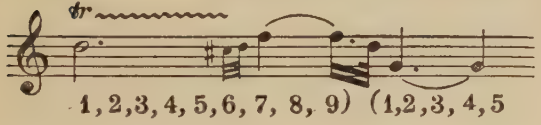


Compounds of simple threes combine to make nines, with nine possible variants:

BEETHOVEN



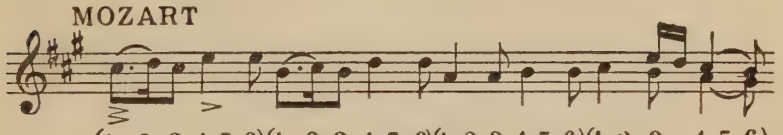
(1,2,3,4,5,6,7,8, 9) (1, 2, 3, 4, 5, 6, 7, 8, 9)



1, 2, 3, 4, 5, 6, 7, 8, 9) (1,2,3, 4,5

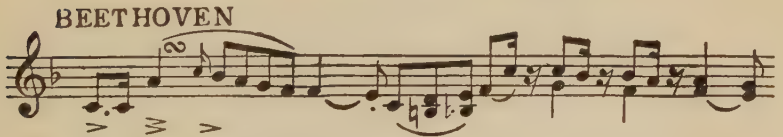
MIXED ACCENT GROUPS, or COMPLEX ACCENT GROUPS are those formed by uniting two simple groups of threes into a larger group of six, or three simple groups of twos into a group of six:

MOZART



(1, 2,3,4,5,6)(1, 2,3,4,5,6)(1,2,3,4,5,6)(1,2,3, 4,5,6)

BEETHOVEN



(5 6,1, 2, 3,4)(5,6,1,2,3,4) (5, 6,1,2, 3,4) (5,6, 1,2,3

In the notation of rhythm a difficulty arises in regard to mixed accent groups which will be treated in the paragraph discussing time signatures.

NOTATION OF ACCENT GROUPS.

The BAR line is a vertical stroke across the staff drawn before each beat 1 of a group, whether simple or compound; that is, before each strongest accent of the group form.

These bars mark off the music into regular sections called MEASURES, which are often confused with the metric or accent group, since they have the same length and are so obvious in appearance.

It is important to understand thoroughly the distinction between a measure and an accent group. The latter has the same length as the former, but may begin on any beat of the measure. The latter is the real musical group, the former is the mechanical indication of group.

The TIME SIGNATURE is a fraction placed after the key signature on the first staff of the music (not repeated with each staff).

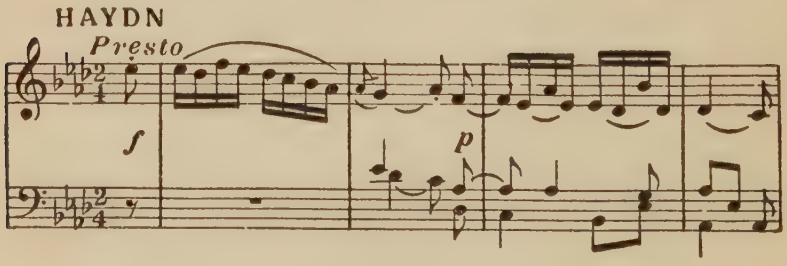
It serves to tell the meter in the following way: the numerator of the fraction gives the number of beats in the accent group, while the denominator, with one as numerator, gives the name of the note-value for each beat.

Music, the measure of which contains two units, or its square, is said to be in DUPLE TIME. The signatures of duple time in common use are:

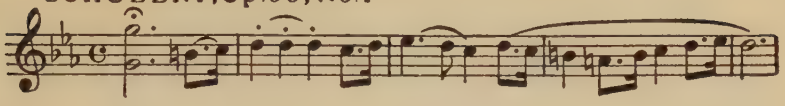
Single duple time, $\frac{2}{2}$, $\frac{2}{4}$, $\frac{2}{8}$.

Compound duple time, $\frac{4}{2}$, $\frac{4}{4}$, $\frac{4}{8}$.

A common substitute for $\frac{2}{2}$ is the sign ¢. This must be distinguished from the equally common sign C without the vertical line, which is usual as a substitute for $\frac{4}{4}$. Consult the dictionary, under the head ALLA BREVE, for further statement of the meaning of these signs:



SCHUBERT, Op. 90, No. 1



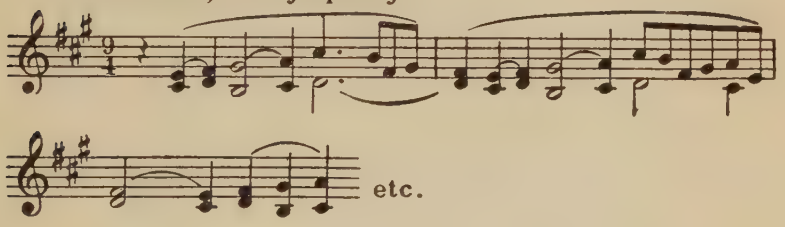
Music, the measure of which contains three units or its square, is said to be in TRIPLE TIME. The signatures of triple time in common use are:

Simple triple time, $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$.

Compound triple time, $\frac{9}{4}$, $\frac{9}{8}$, $\frac{9}{16}$.

VOLKMANN,

BRAHMS, 3d. Symphony.

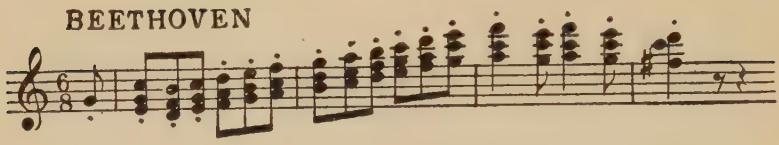


Music, the measure of which contains the multiple of three units by two, has sometimes been classed under the head of duple, sometimes under the head of triple time. A more exact name would be MIXED TIME. The signatures of mixed time in common use have as numerator either 6 (threes combined by twos), or 12 (threes combined by twos and by twos again). They are:

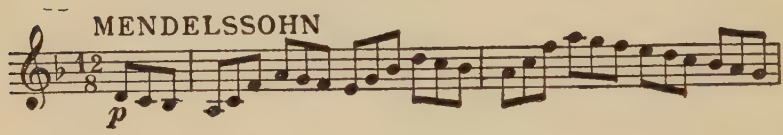
Compound mixed time, $\frac{6}{4}$, $\frac{6}{8}$, $\frac{6}{16}$.

Double-compound mixed time, $\frac{12}{4}$, $\frac{12}{8}$, $\frac{12}{16}$.

BEETHOVEN

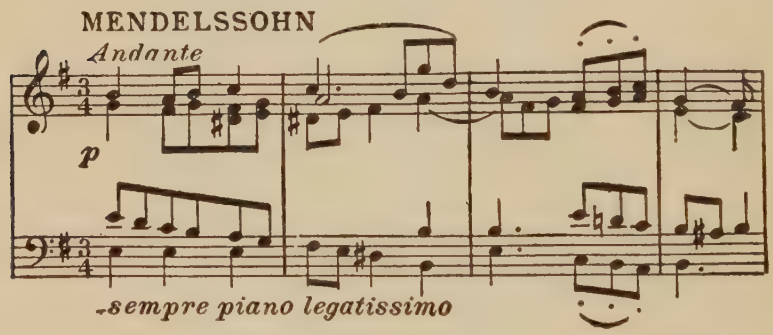


MENDELSSOHN



The opposite kind of six-beat group, in which the simple group is of two, does not have a true time signature, but borrows the simple signature of its larger grouping (3).

MENDELSSOHN



$\binom{6}{8}\binom{\geqslant\ \ >\ \ >}{1\ 2\ \ 3\ 4\ \ 5\ 6}$

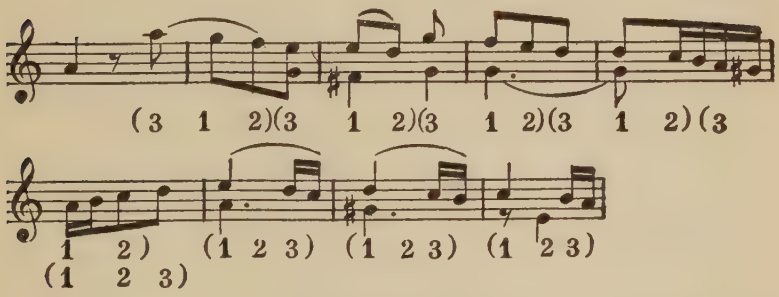
This observation is important to the practical student, for it furnishes him the following rule: *In counting music of moderate or slow tempo with the signatures* $\frac{3}{4}$ *or* $\frac{3}{2}$, *count six beats to the measure, accenting beats 1, 3 and 5.*

Double-compound time signatures are rarely found in music, except that already given with 12 for numerator. They offer no difficulty to the student.

Music with irregular time signature, such as $\frac{5}{4}$ or $\frac{7}{4}$, is a form of mixed time due to alternation of two or more differing simple groups; the group of 5 being $2+3$, or $3+2$; the group of seven being $3+4$ or $2+3+2$, or $4+3$. The simple groups can usually be detected on internal evidence quite readily.

Interchange of Accent-Group Forms.

Since the chief value of a rhythm depends upon the regularity of the recurrent accent, and not so much on the place of the accent in the group, advantage is often taken of this fact in music, as in poetry, to change the group form without altering the march of the accents. For example, in the andante of the Beethoven Sonata, op. 26, the rhythmic group — —, suggested by the first three notes, is so often apparently abandoned for the group — that one might regard the unaccented beginning note as a mere preliminary to the latter group form, did not the former plainly assert itself in the sixteenth measure and following. The following extract from Mendelssohn's second Song Without Words illustrates this, where the shift in rhythmic grouping constitutes one of the special charms of the piece:



It is this frequent shift of group form that renders the present mode of marking off measures by bars before the

strongest accents far better than any attempt to indicate the rhythmic groups themselves to the eye. On the other hand, it is necessary that a writer or interpreter of music should perceive in every instance the group form at the moment in use.

Exercises in Accent-Group Rhythm.

First.—Copy out the musical examples in this lesson which have time signatures or bars, inserting the signatures and bars in the proper places.

Second.—Copy the first few measures of pieces in all the different time signatures, which you can find. Place below the music the indications of group form used.

LESSON IX.

SPECIAL EFFECTS OF RHYTHM.

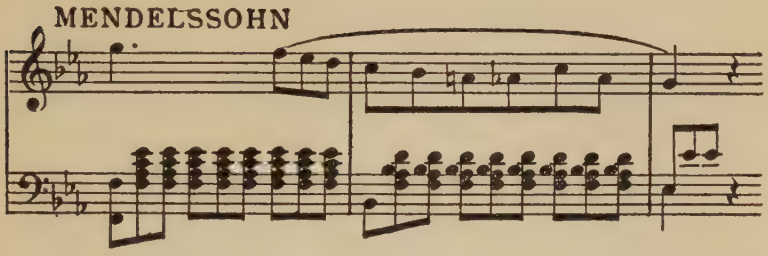
Irregular and Complicated Time.

Composers sometimes interrupt the regularity of the grouping in a piece to insert momentary groupings of another sort. When the notation in this device cannot be effected by the use of the expanded or contracted note values (triplets, etc.), spoken of in Lesson VI., the change of time is indicated by the proper time signature inserted at the moment and corrected when the old time returns.

Often in music two kinds of rhythmic grouping are carried along together. In this case it is customary to use a time signature that fits to the more important rhythm.

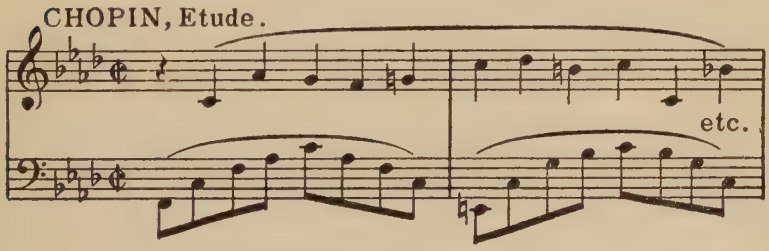
The following example gives a melody in mixed time $(2+2+2)$, and accompaniment in compound triple time. The time-signature of this example is that of the

melody $\frac{3}{4}$. The true time-signature for the accompaniment would be $\frac{9}{8}$.



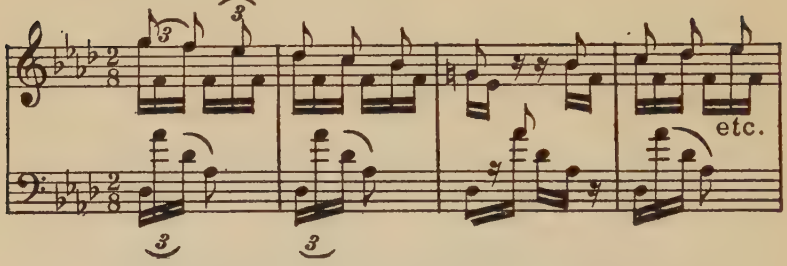
This complication is found somewhat more rarely with three notes against four, or four notes against five.

The true right-hand signature for the following example would be $\frac{6}{4}$, of the left hand, $\frac{4}{4}$.



Instances are also found where the time units coincide, but the rhythmic accents differ, as in the following examples. The right-hand signature of this would be $\frac{3}{8}$ $(2+2+2)$; the left-hand, $\frac{6}{16}$. In seeking for a common signature, Schumann chose $\frac{2}{8}$, thus insisting upon the triplet effect of the left hand, the regular pulsation of which, against the prominent, almost overpowering, simplicity of the melody in $\frac{3}{8}$ constitutes the greatest charm of the music:

SCHUMANN, Op 12, No. 1.



Grammatical and Rhetorical Accents.

The accents which are essential to regular rhythmic groupings are called GRAMMATICAL ACCENTS, to distinguish them from those added, and often irregular, stresses which are used to produce unusual or characteristic rhythmic effects. These are called RHETORICAL ACCENTS. The latter are additions to the regular accent rhythms, and in no sense substitutions for them.

Syncopation.

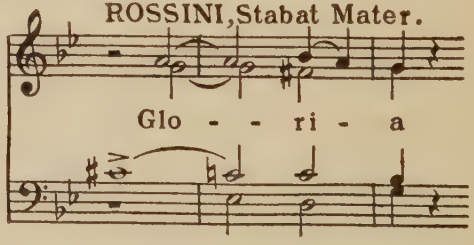
One of the most frequently used and most interesting of these added effects of rhetorical stress is called SYNCOPATION.

This is an apparent displacement of the grammatical accent by giving greater importance to what would else be unaccented.

It may be accomplished—

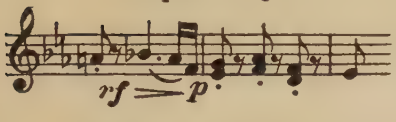
First.—By continuing a tone from the unaccented part of a measure over the time of the regular accent:

ROSSINI, Stabat Mater.

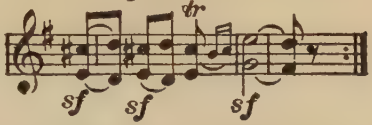


Second.—By a sforzando on a note not regularly accented:

BEETHOVEN,
Septette, Op. 20.

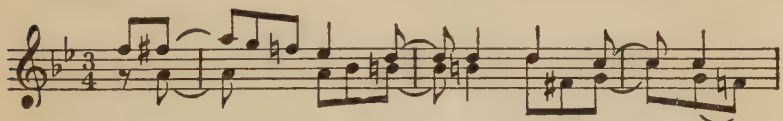


BEETHOVEN,
Op. 14, No. 2.



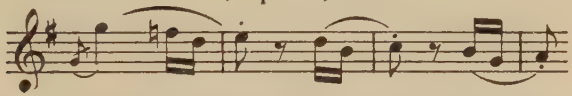
Third.—By slurring from the weakest (unaccented) part of the measure to a strong one:

SCHUMANN



unless the note at the regular accent is the longer, or is given a sforzando mark; thus the following is not syncopated:

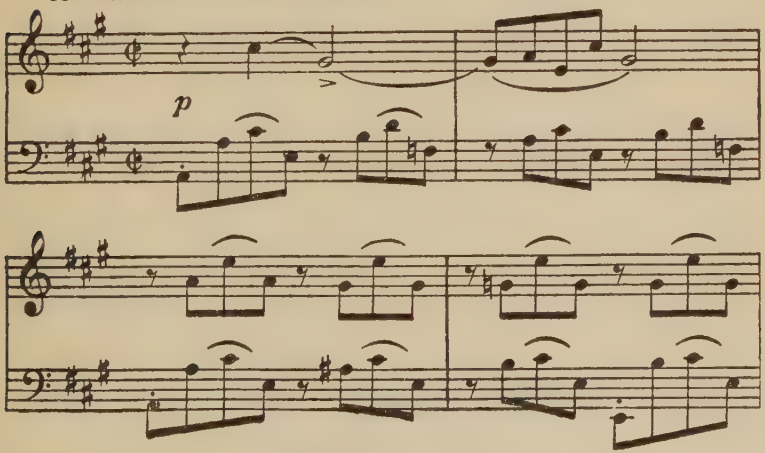
BEETHOVEN, Op 14, No 2



Fourth.—By introducing a rest at the regular accent:

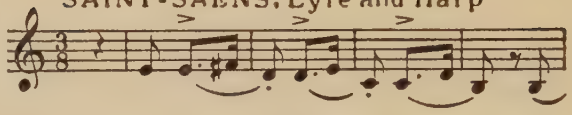
GRIEG

Andante con sentimento



Fifth — By use of longer tone values on the weak parts of the measure:

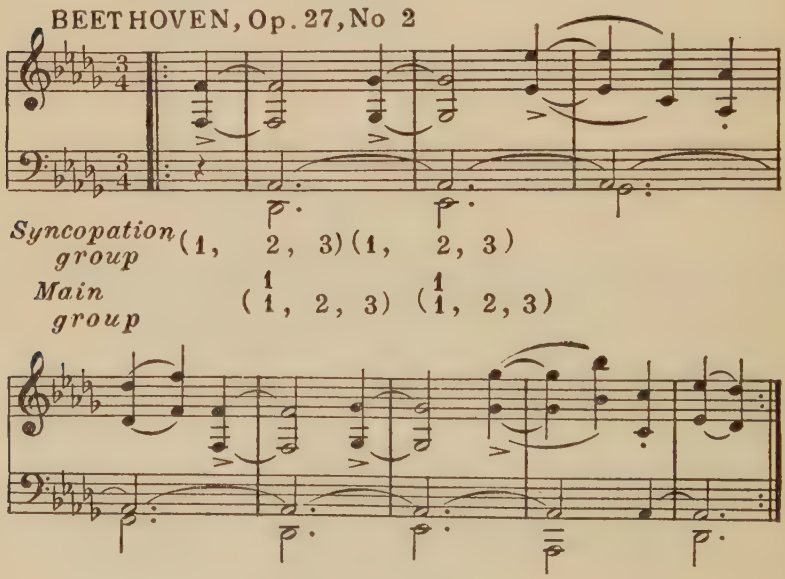
SAINT-SAENS, Lyre and Harp



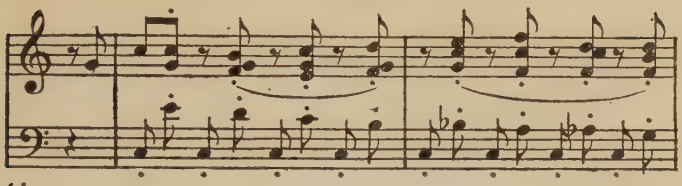
Although these apparent displacements are exceedingly common, and often very beautiful in their occasional and irregular use, the essential nature of syncopation is best seen in its rhythmic use. This consists in combining two rhythms with the accents of the syncopation rhythm always or chiefly where the main rhythm is unaccented.

To be of value, this added rhythm must be continued, on the one hand, long enough to command recognition as a rhythm; and, on the other, not so long as to supplant the old rhythm, and thus cause an actual change of time. The beauty of the device lies in the allegiance of the mind to the old rhythm, which persists against the insistence of the new, and compels its final submission:

BEETHOVEN, Op. 27, No 2

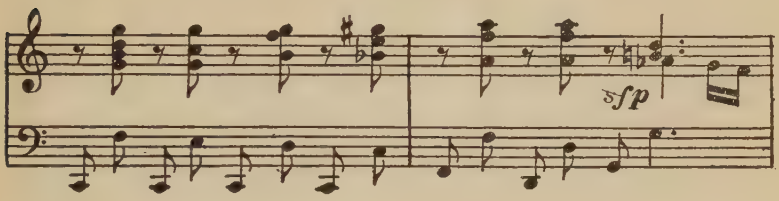


BEETHOVEN, Op. 14, No. 2.

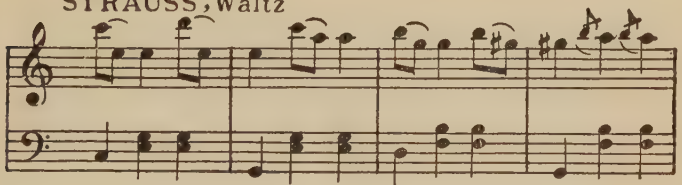


Syncopation group (1 2 3 4)

Main group (1 2 3 4)



STRAUSS, Waltz

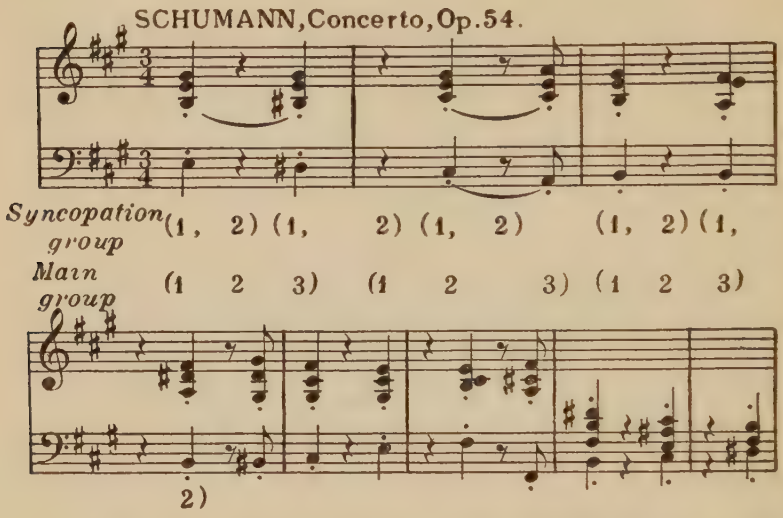


Syncopation group (2 1)(2 1)(2 1) (2 1)(2 (1) 2 3

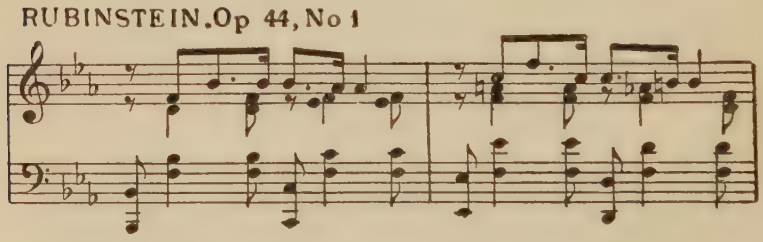
Main group (1 2 3) (1 2 3) (1 2 3) (1 2 3)

Rhythmic syncopation is often so made as to temporarily abandon (in sound) the original rhythm, leaving no way except the memory to preserve the feeling of the original rhythm, as in the following example by Schumann. Most writers, however, either frequently return for a moment to the original rhythm, or introduce it with the syncopation, in order to prevent the listener from losing the syncopation

feeling, and from regarding the music as a simple change of time:

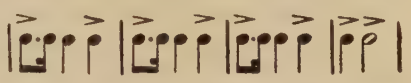


A very beautiful intermittent syncopation is often found in the accompaniment of a melody, where the strongest accents of a rhythm are retained, but the syncopation regularly overthrows the weaker accents:



A final distinction between *rhythm* in its general and universal sense, and *a rhythm*, needs to be drawn here. It is common to use the latter phrase "a rhythm" to describe a musical pattern of tone in rhythm, where the emphasis is placed not upon the grouping of beats, but upon the actual

lengths of the notes as well. Thus we speak of the rhythm of the mazurka, and mean not simply $\frac{3}{4}$ time, but the entire swing given to the melody by its notes in the characteristic values of



There is an additional use of rhetorical accent in dance and march rhythms, consisting of extra stress on the grammatical accents, such as would be out of place in other music, but which here gives the CHARACTERISTIC swing to the RHYTHM. Many dances have also a syncopation accent, and fall into special rhythmic patterns in melody or accompaniment.

RHYTHMIC INTERPRETATION.

No notation of duration or force has ever been devised subtle or complete enough to cover all those shades of expression which lie potentially in any good composition. The general intent of the music, grave or gay, passionate or pleading, may be hinted at in a crude way by word or phrase here and there upon the page; for example: *con espressione, dolce, dolente, vivace, con fuoco, amabile, grazioso, appassionata, maestoso,* and many others.

But beyond this is the something which appeals to the nature of the musician, who then out of his own soul has to develop and complete the expression. This is the art of interpretation, and the great player, like the great actor, is he who can most completely utter the fulness of the thought which lay in the original conception. A perfect interpretation can, indeed, sometimes bring forth more from the music than the composer imagined, but never less.

The delicate accentuations which are supplemental to the written page are sometimes called PATHETIC ACCENTS. It is upon these that the individuality of an interpretation largely depends. One of the problems of notation which a composer must decide in every instance is, how completely he shall write out indications of expression; that is, con-

versely, how far he can safely leave a passage to the sense of the musician for its interpretation, since, in any case, there is much that must remain unwritten.

On the side of the player general condemnation is given to one who insists on an interpretation which disregards the marks of the composer's intention; whereas considerable variation in unwritten effects may be allowed.

Exercises on Special Effects of Rhythm.

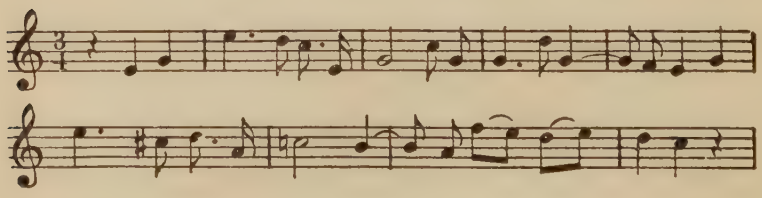
These must consist mainly in examination of printed music to discover

First.—Instances of momentary syncopation;
Second.—Instances of rhythmic syncopation;
Third.—Instances of characteristic rhythms.

The fondness of Schumann, of Brahms, and of the modern French school for these special effects makes it possible to send the student to the pages of their pianoforte writings almost at random in search of these beautiful rhythmic devices.

It will be noticed that sometimes the signatures and accent signs furnish an instant clue to the rhythmic purpose of the composer; but also sometimes nothing but the attempt to play the page reveals the subtle cross purposes of rhythm.

1. Analyze the following melody from the Minnelied of Brahms. Is it a case of accidental or of rhythmic syncopation?



2. State the characteristic rhythm of a waltz. How could the time-signature of regular waltzes be changed to advantage?

3. List and define the words in this lesson that have not been explained.

LESSON X.

CADENCE GROUPS AND THE EFFECT OF RHYTHM ON NOTATION.

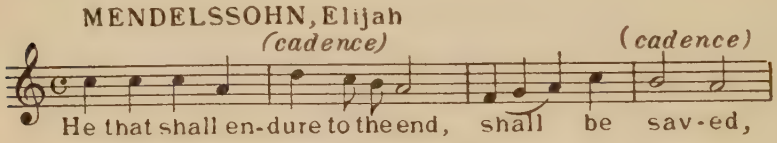
Cadence Groups.

Accent-groups are themselves grouped into CADENCE-GROUPS usually by twos or by fours, more rarely by threes or by fives. In this larger rhythmic-grouping of music the method is no longer through accent, but rather by a shaping of the melodies and harmonies in such a way that there is created the impression of coming more or less to a conclusion. This finish to each of the larger groups is called the CADENCE. In the study of harmony the student learns how to construct the various cadences and how to use them at the end of the proper accent-groups to conclude the cadence-group.

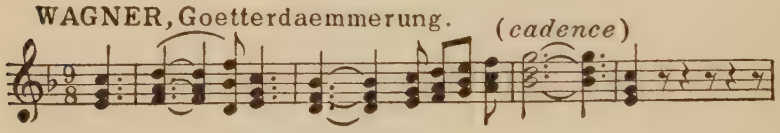
Cadence-rhythms present nothing new under the head of dynamics, and involve notation in but a slight degree. They need, therefore, only such statement here as shall make clear their connection with accent-rhythms. This may be given as follows:

SIMPLE CADENCE-GROUPS are formed by uniting accent-rhythm, simple or compound, by twos or by fours, or only rarely by threes or by fives.

Simple accent-rhythms are apt to group by fours, compound accent-rhythms by twos. The grouping is effected by the cadence which ends the group:



COMPOUND CADENCE-GROUPS are formed by uniting simple cadence-groups, usually by twos, into the larger rhythm. The grouping is effected by having the cadence which closes the compound group more assertive (stronger) than the others:



DOUBLE-COMPOUND CADENCE-GROUPS are formed by uniting compound cadence-groups, by twos, sometimes by threes, to form a group which is felt to be musically complete. Usually a double-compound cadence-group is sufficient to completely express a musical thought. *It is then called a* PERIOD.

[NOTE.—A distinction is to be made between the double-compound cadence-group and the period.

The period is a complete rhythmic utterance of a musical thought. A double-compound cadence-group is almost always a period. But some musical thoughts can be framed within the limits of a compound, or even of a simple cadence-group. These short periods are somewhat exceptional, but not at all abnormal. A careful observance of this distinction is essential to a correct understanding of the rhythmic structure of music.]

The putting together of periods in order to make a complete piece of music is the problem of MUSICAL FORM. Rhythm is thus seen to merge into musical form, and to be the constructive time element of music at every stage.

NOTATION OF CADENCE-RHYTHMS.

The only notation-symbol that is connected with cadence-rhythm is the double bar: This is drawn at the end of a composition or of some cadence-group thereof. Since it is based on the rhythmic group, and not on the measure as such, it frequently comes in the middle of a measure, and is not to be counfounded with the measure-bar. Often in hymn-tunes a single broad bar, which is a modified double-bar, is drawn at the close of each simple cadence-group (sung to a line of verse). The laws for its placing, therefore, are the same as for the double-bar.

THE EFFECT OF MEASURE ON THE WRITING OF NOTES AND RESTS.

The rules for the writing of notes are based, not upon the rhythmic group, but upon the measure and its divisions. For this purpose a distinction is made between the strong and the weak parts of the measure, as follows:

The first beat of the measure is the strongest part of it. Other accented beats are relatively strong or weak as they are in the rhythmic group. Unaccented beats are weaker than accented; and the beginning of any beat is stronger than its continuation.

The largest divisions of a measure are from strong accented beat to strong accented beat; the smaller divisions are from any accented beat to the next accented beat.

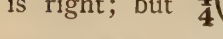
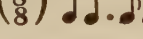
RULE I.—A tone or silence filling a measure, a measure-division, or a complete beat must be written as a single character.

The exceptions to this rule are

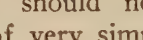
(*a.*) When it is the length of five, seven, or nine beats.

(*b.*) When tied notes simplify the notation (see Lesson VI).

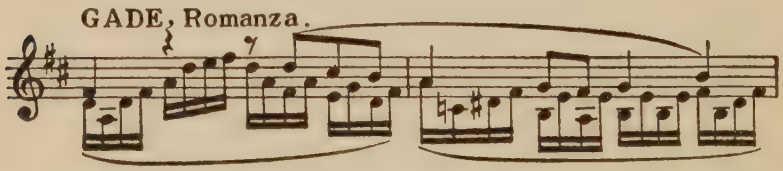
(*c.*) Three eights usually take the following rests, instead of .

Rule II.—A tone that begins a measure-division but extends beyond it is written as a single character *only when the extension is produced by a dot, and it passes no stronger accent than that on which began.* Thus is right; but  should be  and should be

Rule III.—Syncopation-tones that pass an important measure-division should not be written as single notes, except in case of very simple syncopation.

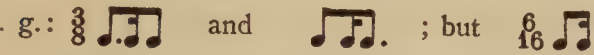
Thus is right, not ; but  is usual.

Rule IV.—Notes of small value stroked together (i. e., with hooks joined) should not carry the stroking beyond a measure-division. When as many as four of the notes stroked come within a beat, usually the stroking does not pass the beat; e. g.:

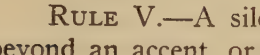
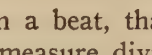
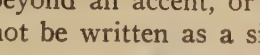


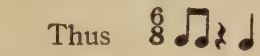
A single stroked note of smaller value than the remainder, turns its extra stroke toward the dotted note with

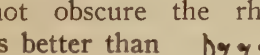
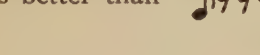
which it combines, or, no dotted note is present, toward the other notes in the same beat or measure-division.

e. g.:  ; but

Rule V.—A silence longer than a beat, that continues beyond an accent, or does not fill a measure division should not be written as a single rest.

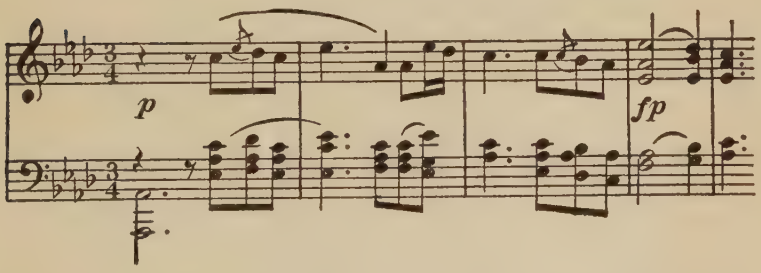
Thus  should be  ; and 

should be 

The exception to this is when a number of rests of small value would be confusing, and the larger rests does not obscure the rhythm. For example  is better than 

Exercises on the Notation of the Measure.

1. Correct the notation of the following passage:



2. Change the time-signature of the quotation from Beethoven $\frac{6}{8}$. (Lesson VIII., page 162) to $\frac{3}{4}$ and make the necessary corrections in notation.

Treat in the same way the two following quotations from Mendelssohn, changing $\frac{12}{8}$ to $\frac{6}{4}$, and $\frac{3}{4}$ to $\frac{6}{8}$

3. Write suitable rests for a half-measure of time beginning at the first beat; beginning at the second beat; beginning at the third beat.

Write suitable rests equal to a doubly-dotted half-note in time beginning with the second beat of a measure.

4. Group the stroked notes of the following passage suitably to indicate 12 time, 6 time, and 3 time:

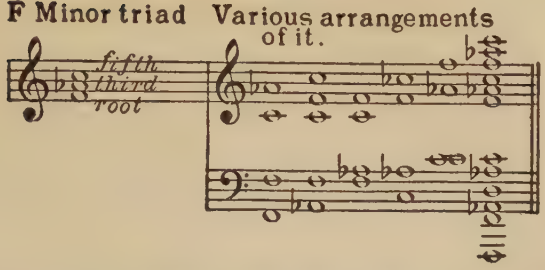
LESSON XI.

CHORDS.

The study of harmony is the study of chords and their handling.

A CHORD consists of three or more tones, expressed or implied, which so stand related to each other, when sounded at the same instant, that they create a musical unity or whole. Not all the tones that may be sounded at once form a chord, although any two can serve to suggest some chord of which they are part. Tones that do not belong in a given chord are always felt as in transit — to or from a note of it, and are called NON-HARMONIC TONES. Most non-harmonic tones are NEIGHBORING TONES, that is, are tones a half- or a whole-step away from a chord-tone, *and have a melodic tendency toward it.*

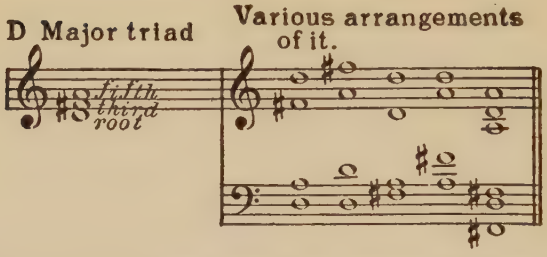
The simplest and most restful chord in music is that known as the MAJOR TRIAD (i. e., a three-tone chord). It consists of a *tone, its major third,* and *its perfect fifth,* and any or all duplicates of these in different octaves. The names of the three tones are *root, third* and *fifth:*



[NOTE.—This chord is derived from the harmonic chord of nature. An interesting experiment making this plain is as follows:

Thrust pencils under the fall-board of a piano above the keys so as to depress small c and g, one-lined c and e, and so as to raise the dampers without causing the strings to sound. Now strike great C, but quickly release it, so that the damper falls and checks its tone. You will find that the four other strings continue singing the full chord (triad) of C, since these are the first-four harmonics of the tone C, and have been set into sympathetic vibration by the striking of the latter key. If you strike any other key of the great- or sub-octave the undamped chord will sound but in part or not at all. Harmonics are actually present in every single tone, as was explained in Lesson VII, though not apprehended by us as separate sounds. The unconscious education of the ear, however, leads us to accept with special satisfaction and recognize as a real unit any combination of tones taken from these lower harmonics of the chord of nature. For, just as simple tones appear and die away in nature, so we are led to accept the appearance of the chord derived from the chord of nature equally as restful and independent.]

The next chord in simplicity and restfulness of feeling is that known as the MINOR TRIAD. It consists of a *tone, its minor third* and its *perfect fifth,* and any or all duplicates of these in different octaves:



[NOTE.—By a demonstration somewhat more complicated some theorists attempt to show that the minor triad has, equally with the major triad, a logical physical basis in what are known as combination tones, or in a downward series of harmonics from the second octave above the fifth of the chord. It is, however, sufficient excuse for the feeling of unity, and of restfulness, to observe that the chord has the identical intervals of the major chord, and differs solely from the latter in the order of the intervals.]

These two triads are the only chords which are musically independent, and inherently restful. They are known as CONSONANT CHORDS, since the intervals that enter into them, and their inversions are all consonant intervals. (See Lesson IV. under Intervals.)

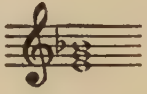
All other chords than these two are unrestful or incomplete; that is, they seem to require to be followed by a suitable consonant chord in order to complete the sense. They are called DISSONANT CHORDS. Most of the intervals that enter into them are seen to be consonant; but in every chord at least one interval that is not consonant is found, and one or both of the tones of this interval create the unrestful feeling that characterizes the chord. It is not the harshness of a chord or interval that makes it dissonant. On the contrary, some of the dissonant chords are far more smooth than most arrangements of the major or minor triad; and they are frequently chosen by composers for the pure loveliness of their combination of tones. But they refuse to assert

finality; they pass one on to the something which is to follow.

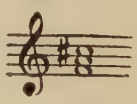
[NOTE.—Consonant triads sometimes do this too; but it is because of the special arrangement of their tones, or of the place of the chord in rhythm, and not because of the inherent character of the chord itself.]

The dissonant triads which have attained importance in harmony are:

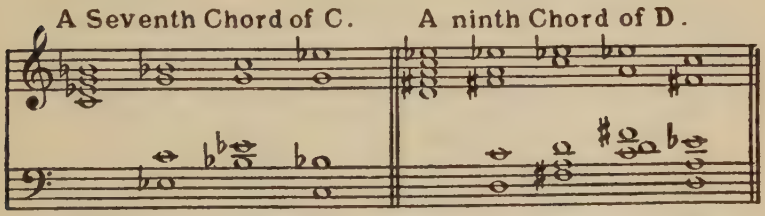
The DIMINISHED TRIAD. This differs from the minor triad, in that its *fifth is diminished;* e. g.:



And the AUGMENTED TRIAD. This differs from the major triad, in that its *fifth is augmented.* e. g.:



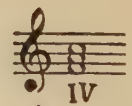
Four-note chords have *root, third, fifth,* and *seventh,* and are called SEVENTH-CHORDS. *Five-note chords* have *root, third, fifth, seventh,* and *ninth,* and are called NINTH-CHORDS.



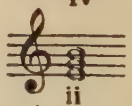
All chords, but especially seventh and ninth chords, derive the laws of their usage largely from their respective values in a key. Some are important because they inherently help to create and establish the feeling of key, while others are valuable only if they are rightly used. It is necessary, therefore, to know of what sort the chords found on the different degrees of the scale are; i. e., chords constructed with the use only of scale tones.

[NOTE.—A shorthand indication of the character of chords may be made as follows. This system will be used in the succeeding lessons:

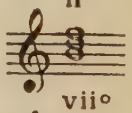
The major triad, indicated by large Roman numeral X; e. g.:



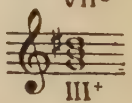
The minor triad, indicated by small Roman numeral x; e. g.:



The diminished triad, indicated by small Roman numeral x°; e. g.:



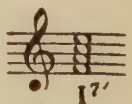
The augmented triad, indicated by large Roman numeral X+; e. g.



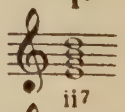
When located in a key, substitute for X the degree number of the chord-root; e. g., I, vii°, III+, etc.

Seventh and ninth chords, indicate the triad as above, but add Arabic 7 or 9 with the following indications:

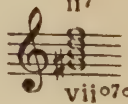
Arabic figure with ′ for major interval; e. g.:



Arabic figure alone for minor interval; e. g.:

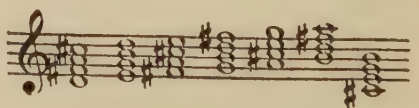


Arabic figure with ° for diminished interval; e. g.:

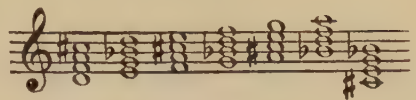


A display of the chords of the scales can be made as follows:

D Major scale chords:



I7′, ii7, iii7, IV7′, V7, vi7, vii°7

d Minor scale chords: 

$i^{7'}$, $ii^{\circ 7}$, $III^{+7'}$, iv^{7}, V^{7}, $VI^{7'}$, $vii^{\circ 7^{\circ}}$

From this it will be seen that the different triads appear, as follows:

X is found in the major scale as I, IV and V; in the minor scale as V and VI.

x is found in the major scale as ii, iii and vi; in the minor scale as i and iv.

x° is found in the major scale as vii°; in the minor scale as ii° and vii°.

X^{+} is only found in the minor scale as III^{+}.

$X^{7'}$ is found in the major scale as $I^{7'}$ and $IV^{7'}$, in the minor scale as $VI^{7'}$.

X^{7} is found in the major and minor scales only as V^{7}.

$x^{7'}$ is found only in the minor scale as $i^{7'}$.

x^{7} is found in the major scale as ii^{7}, iii^{7}, vi^{7}, and in the minor scale as iv^{7}.

$x^{\circ 7}$ is found in the major scale as $vii^{\circ 7}$ and in the minor scale as $ii^{\circ 7}$.

$x^{\circ 7^{\circ}}$ is found only in the minor scale as $vii^{\circ 7^{\circ}}$.

$X^{+7'}$ is found only in the minor scale as $III^{+7'}$.

Exercises in the Location of Chords.

1. Write out upon the staff the series of triads in the scale of D (major), using no signature but supplying the proper accidentals. After observing the character of each triad thus constructed, add beneath it the proper numerals.

Write out and treat in like manner the triads of the scale of d (minor), and add as before the proper numerals.

2. Write out and treat in like manner the seventh chords of the scale of D.

Write out and treat in like manner the seventh chords of the scale of d.

Repeat these exercises with other major and minor scales, until the matter is wholly clear.

3. Construct the major (X) triad upon a given note and add beneath it the proper numerals and key indications for the various keys in which it could stand as a scale-chord.

This, as worked out upon ♭e, gives the following result:

I in the key of ♭E (major).
IV in the key of ♭B.
V in the key of ♭A.
V in the key of ♭a (minor).
VI in the key of g.

Test this many times until you can tell readily the possible keys of any major triad. Then construct in like manner the minor triad (x) upon a given note and locate it. Make this test also until you can tell readily the possible keys of any minor triad.

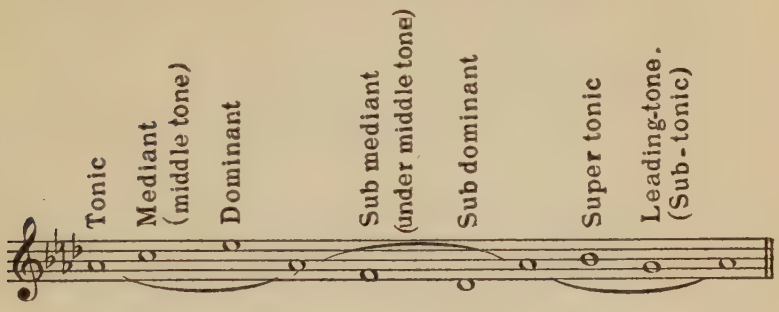
4. In corresponding manner construct and locate the remaining triads x° and X^{+}, and all of the seventh chords. Do not give up the exercise until you have mastered at least the possible location in keys of all triads and of the following seventh chords, X^{7}, x^{7}, and $x^{\circ 7}$, which are the most important.

[NOTE.— The ability to recognize the possibilities of chords lies at the basis of freedom in modulation; i. e., the art of passing from key to key.]

THE SCALE NAMES OF NOTES AND OF CHORDS.

The keynote of a scale is called the TONIC. The note on the second degree of the scale is called the SUPERTONIC; on the third degree, the MEDIANT; on the fourth degree, the

SUBDOMINANT; on the fifth degree, the DOMINANT; on the sixth degree, the SUBMEDIANT; and on the seventh degree, the LEADING-TONE. The chords on the different degrees are called also the tonic chord, the supertonic chord, etc.:



[NOTE.—It is worth while to become familiar with these names, and use them always. This avoids confusion. For example, in using the worth seventh, one need never say the seventh-degree seventh-chord, but rather the leading-tone seventh chord.]

ARRANGEMENTS OF CHORDS.

On the whole the easiest way of studying the relationship of chords and at the same time of making practical application of them to the conditions of actual composition of music is to write as if for what is known as a mixed quartet; i. e., vocal music for soprano, alto, tenor and bass. The soprano should rarely go below one lined c′, or above two lined g″; the alto should rarely go below small g or above two lined d″; the tenor should rarely go below small c or above one-lined g′; and the bass should rarely go below great F or above one lined c′. Especially at the very beginning and at the end of the music the parts should keep well within these limits; for to sing at the very top or bottom of

one's voice is ill suited to the poise of well calculated start or finish. It is like the use of a loud, high-pitched voice at the beginning or ending of a speech.

In writing for four voices (parts) it is plain, also, that the three-note chords (triads) will have one note doubled at unison or at octave. Consonant triads in general sound best with root doubled, and are least likely to sound well with third doubled, unless the third be doubled at octave between the soprano and an inner part (alto or tenor). The dissonant triad most often met (vii°) doubles freely either note *except the root.*

Occasionally one meets triads with a note omitted. The omitted note is usually the fifth; because this produces no confusion as to the chord: while if the root were omitted the third might seem to be root of another chord, or if the third were omitted the chord might prove either major or minor. In case of such omission in four-part writing either the two remaining tones are each doubled, or the root of the chord appears in three of the parts.

It is also a general rule that the distance between bass and tenor may be an octave or more, while the distance between adjacent upper parts should rarely equal or exceed the octave. This law of chord balance is plainly drawn from the influence upon the sense of hearing of the harmonic chord of nature.

Inversions of Chords.

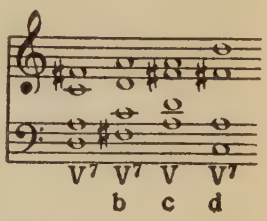
Chords, like intervals, are subject to INVERSIONS. If the *root* of the chord is the bass note the chord is said to be FUNDAMENTAL POSITION. The indicated $\underset{a}{X}$, need not be used, however, except in special cases to avoid confusion.

If the *third* of the chord is the bass note the chord is in FIRST INVERSION; indicating $\underset{b}{X}$.

If the *fifth* of the chord is the bass note the chord is in SECOND INVERSION; indicating $\underset{c}{X}$.

If the *seventh* of the chord is the bass note the chord is in THIRD INVERSION; indicating $\frac{X}{d}$.

No *further inversion is possible,* as the next chord tone, the ninth, passes beyond the octave; and the disappearance of the actual ninth would remove the characteristic interval of the chord, so that it would cease to be the ninth chord:



EXERCISES IN THE ARRANGEMENT OF CHORDS IN SCALES.

1. Write the subdominant triad of the key of D in first inversion, so that its notes may be sung easily by a mixed quartet and the chord otherwise conform to the rules of a good arrangement.

2. Write the submediant triad of the key of c minor in four parts in an arrangement that permits the third of the chord to be doubled.

3. Write the dominant seventh chord in third inversion in the key of F, with good arrangement for a mixed quartet.

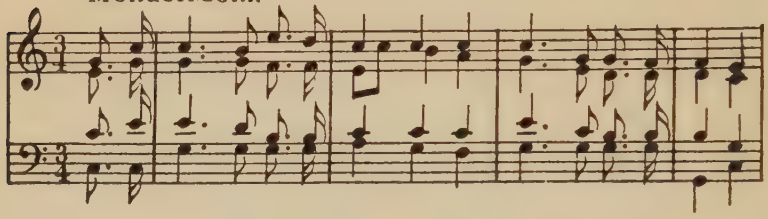
4. Write the mediant triad of the key of G in four parts, omitting the fifth of the chord, but asserting properly the mediant impression of the chord.

5. Write the leading-tone triad of the key of ♭E, with the bass and the soprano as high as they can properly sing and the other parts so disposed as to give a good arrangement of the chord.

6. Write the dominant seventh chord of the key of e minor in second inversion for mixed quartet with the four parts as close together as they can be and have each part within its proper range.

7. Place under each of the following chords the proper descriptive signs, including those for inversions:

Mendelssohn



LESSON XII.

MELODIC MOTION.

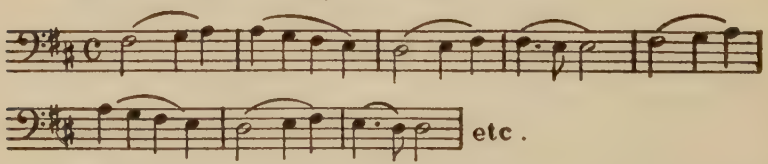
In moving from one position of a chord to another, or from chord to chord, the progress of the individual parts (voices) follows the laws of melody, and these laws, stated briefly below, interact upon the laws of chord-arrangement just given in the previous lesson.

Terms of Motion.

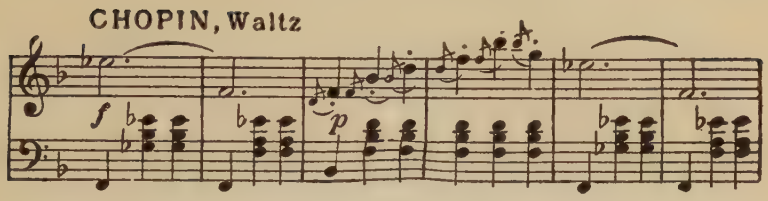
A few technical terms of motion need to be defined here.

Conjunct-motion is melodic succession from one degree to the next:

BEETHOVEN, Ninth Symphony.

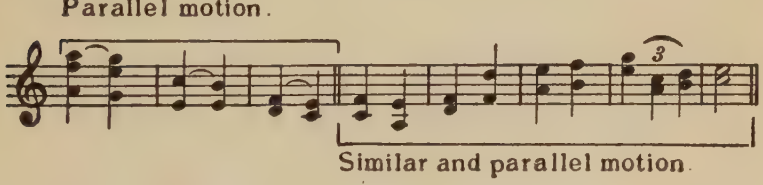


Disjunct-motion is melodic succession which skips one or more degrees:

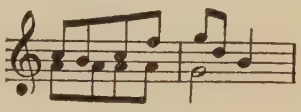


PARALLEL-MOTION is melodic movement of two parts which preserve the same interval with each other; e. g., parallel fifths, parallel octaves, parallel thirds.

SIMILAR-MOTION is melodic movement of two parts in the same direction (up and down). This term includes the previous one, "parallel":



OBLIQUE-MOTION is melodic movement of one part, while the other repeats or continues the same tone:



CONTRARY-MOTION is melodic movement of parts in opposite directions:

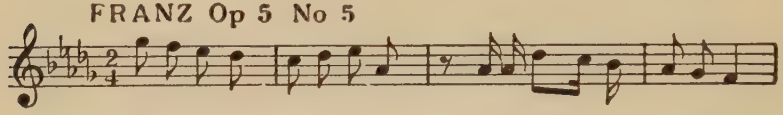
LAWS OF MELODIC-MOTION.

Good melody in general is understandable melody, which yet affords variety and has climax and proportion.

The simplest melodic succession is repetition of the same tone.

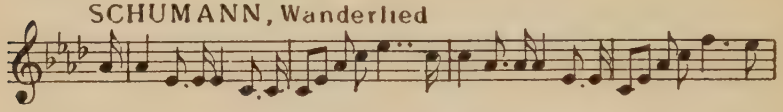
The next in simplicity is conjunct-motion in a major or minor scale:

FRANZ Op 5 No 5



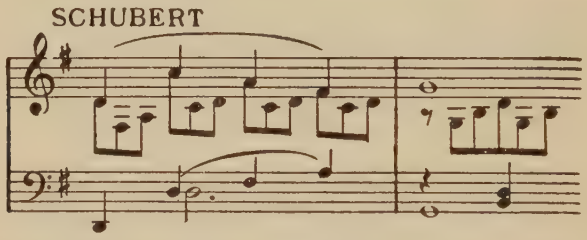
The next in simplicity is a skip of a consonant interval from one chord tone to another of the same chord, or to a non-harmonic tone with the same chord:

SCHUMANN, Wanderlied



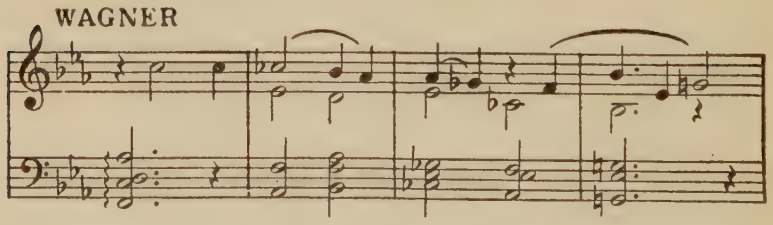
The next is a skip of a dissonant interval from one to another tone of the same chord:

SCHUBERT



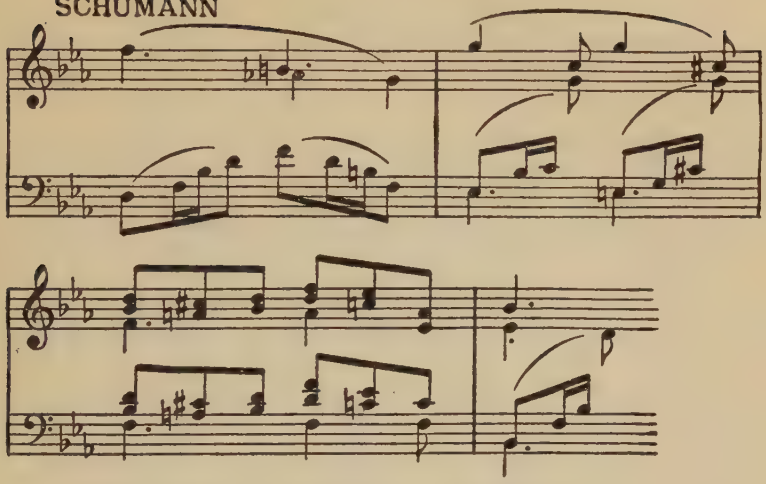
Skips, even of consonant intervals, at the moment when a change of chord occurs are more difficult to follow, and thus harder to make satisfactory:

WAGNER



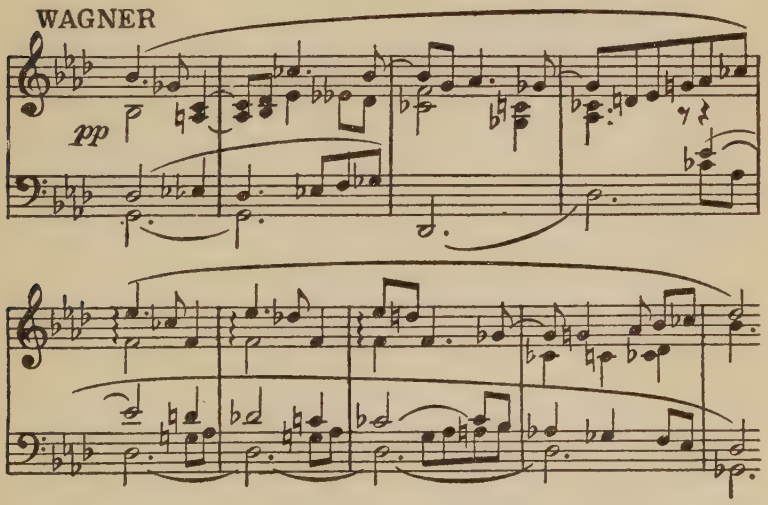
Skips of dissonant intervals when a change of chord occurs are especially hard to understand:

SCHUMANN



Difficult skips are often made palatable, however, if the melody, in its continuation, turns back by conjunct-motion toward the tone from which the skip was made, or if the skip in one direction be followed by a return skip in the opposite direction:

WAGNER



A series of skips should be followed by a passage in conjunct-motion; and the proportion of conjunct-motions in a melody should exceed the disjunct. (See illustrations already given.)

Finally, the less prominent a melody is (e. g., an inner part) the more simple it should be. Alto and tenor parts, unless some exceptional prominence be intended, should confine themselves to conjunct-motion and small consonant skips.

This brief statement of some of the laws of melodic-motion does not include the law of rhythm in melody, important as that is, nor the laws of proportion and climax in melody. Some hints bearing upon all these points will be given from time to time in the following lessons in harmony.

If the student has mastered the previous pages he is equipped to make a first essay at musical expression; for from the outset the study of harmony should be recognized as a study in self-expression,— an accumulation of the means of composition. The very first task of it might be that which a Beethoven, a Wagner or a Debussy, could set himself. That is, composition draws on the resources of harmony and harmony conversely is, step by step, solving momentary problems of composition.

Exercises in melody writing may be deferred until they occur in connection with the lessons in harmony and in elementary composition; for the student in these lessons will be constantly referring back to the rules just given. He is advised, however, to observe with care the melodies in printed music, and see how they conform to the statements of the preceding pages.

ELEMENTARY HARMONY

IN TWELVE LESSONS.

GEORGE COLEMAN GOW.

ANALYSIS OF LESSONS.

Introductory Note.

I. The Single Consonant Triad.

II. Principal Triads in Fundamental Position.

III. Principal Triads in Inversion.

IV. Harmonization of Melody.

V. The Dissonant Tendency-Chords to the Tonic.

VI. Subordinate Chords.

VII. The Minor Key and Mixed Modes.

VIII. Other Diatonic Chords and Chromatic Notes.

IX. Imitation.

X. The Chromatic Tendency-Chords.

XI. Cadences.

XII. Modulation.

ELEMENTARY HARMONY

George Coleman Gow.

INTRODUCTORY NOTE.

The student who is to make use of these lessons is assumed to have familiarity with the staff and the names of pitches (great G, two-lined d, etc.); with the scales, major and minor, as written both with and without signatures; with the intervals; with the correct writing of notes; with rhythm and period construction; with chord construction and analysis; and with the fundamental laws of melody. All of these matters have been treated in the Twelve Lessons in Elementary Theory and Notation which precede the present lessons.

LESSON I.

THE SINGLE CONSONANT TRIAD.

The first task in musical expression should be to use effectively the resources of a single consonant triad.

Task I.—Melody and Accompaniment.

Having arranged a given consonant triad in fundamental position as if its notes were to be sustained through-

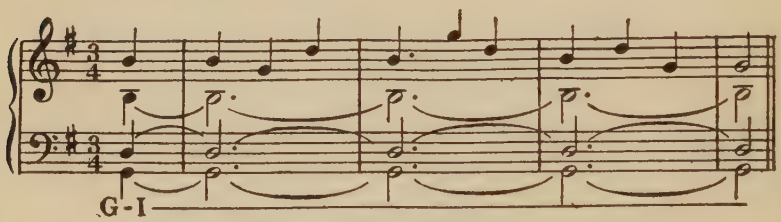
out a cadence-group by bass, tenor and alto singers, the task is to add a soprano melody in free motion.

This is not, properly speaking, a harmony exercise; but it prepares the way for the harmonic study immediately to follow.

When we hear such a single consonant triad it is naturally assumed to be a keynote chord,— the tonic triad of a major or a minor key. A signature may therefore be given to the exercise in accordance with the chord chosen.

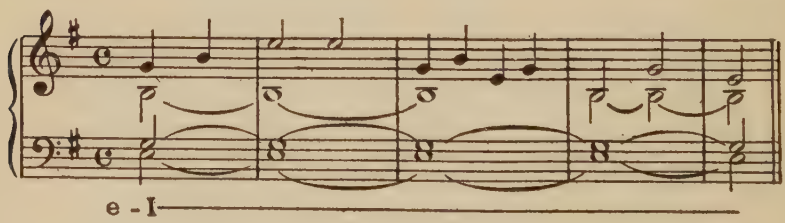
The melody can be made either wholly out of chord tones, or it may have some neighboring tones.

Example 1.— Using chord tones only. Accent-group form,— 3, 1, 2:



[Note.—The capital G indicates the major key; the capital I, the tonic chord.]

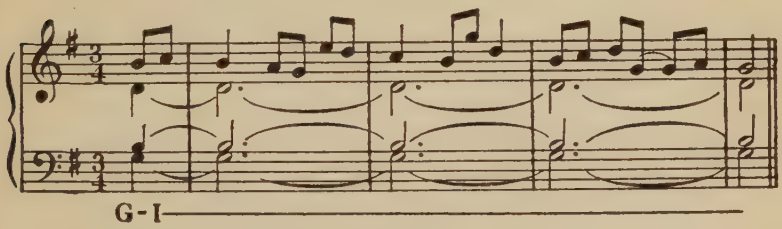
Example 2.— Using chord tones only. Accent-group form,— 3, 4, 1, 2:



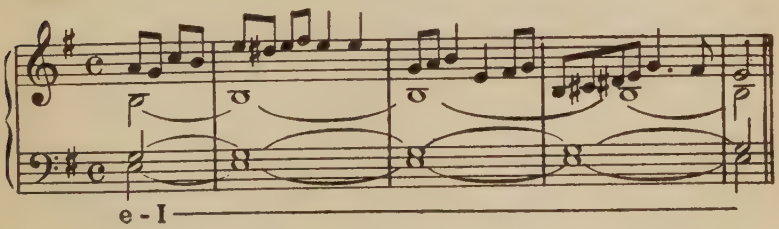
[Note.—The small e indicates the minor key; the capital I, the tonic chord.]

In using neighboring tones to soften the melodic outline, notice that skip may be made *to* the neighboring tone but not *from* it. Observe the different effect of a neighboring tone that comes with the beat from one that comes after the beat. Either is possible, but one produces a more rugged type of melody. Which is it?

Example 3.— Using neighboring tones. Accent-group form,—3, 1, 2. The chord tone basis of this exercise is the same as that of Example 1.



Example 4.— Using neighboring tones. Accent-group form,— 3, 4, 1, 2. The chord tone basis of this exercise is the same as that of Example 2.



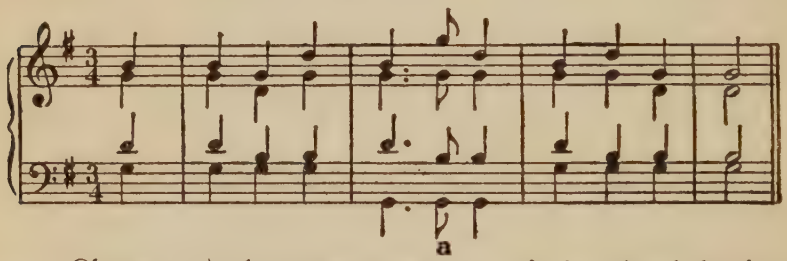
Exercise I.—Let the student seat himself at the piano and, while holding with the left hand a consonant triad such as the task prescribes, let him experiment in composing many melodies according to the purpose of this task. Such of the melodies as seem interesting let him write out fully with the chord, like the examples above.

Task II.— Harmony in the Single Chord.

Without abandoning the fundamental position of a chord, the upper melody as it recedes or approaches to the bass note easily suggests a possible rearrangement of the chord. This rearrangement, if it is adopted, brings into the music melodic-motion of the two inner parts. Thus the music becomes properly harmonic, since the writing of it involves both new positions of chord and the melodic motions resulting therefrom.

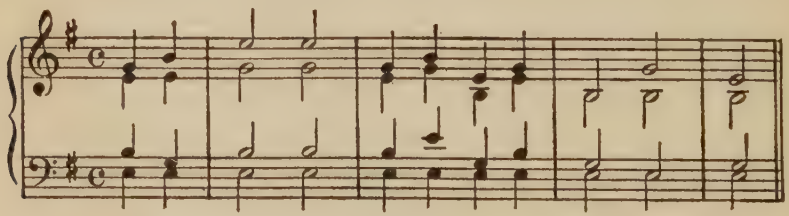
[Note.— Before studying this task further the student should review carefully the lessons in Elementary Theory which treated of the positions of chords and of melodic motion (pages 178 and 188).]

Example 1.— Utilizing the melody of Example 1, Task I.:



Observe *a)* the momentary use of the chord having three g's and no d, and the distance between bass and tenor in the same measure.

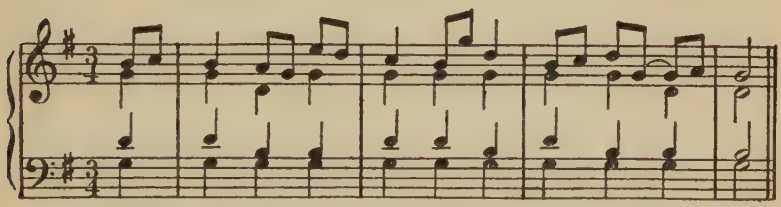
Example 2.— Utilizing the melody of Example 2, Task I.:



Observe that if the second chord of the third measure had been arranged as is the second chord of the piece, this would have avoided the following rather wide skips of inner parts. Such skips, however, in repetitions of the same chord, are perfectly justifiable.

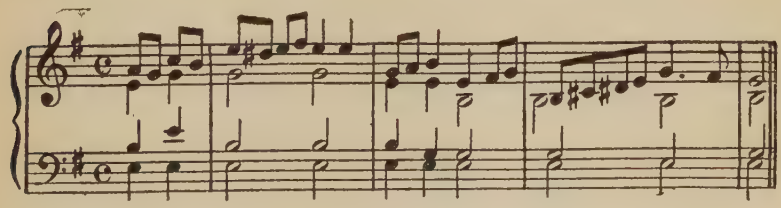
Observe also the doubled fifth in the next to the last measure, first chord, and the doubling of tenor and bass at the unison on the root of the chord, same measure, last chord.

Example 3.— Utilizing the melody of Example 3, Task I.:



Compare this example carefully with Example 1, Task II. Notice that a neighboring tone *on the beat* is harmonized as if it were the following tone; that is, the tone to which it tended, while a neighboring tone *after the beat* keeps the harmony of the previous tone.

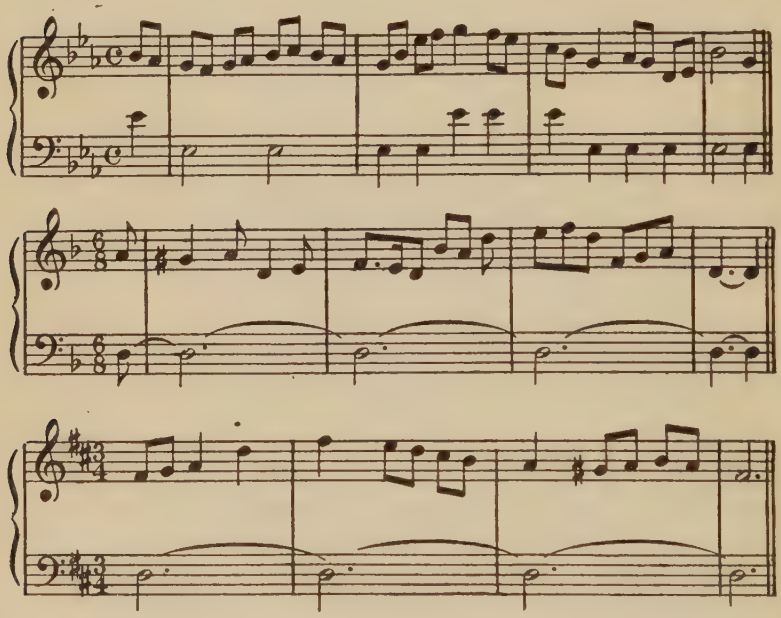
Example 4.— Utilizing the melody of Example 4, Task I.:



Compare this example also with Example 2, Task II. Notice that the last beat of the third measure affords a case

of doubling the third in order to make a simpler and pleasanter movement of inner parts than would otherwise have arisen.

Exercise II.—(*a*) Write alto and tenor parts to the following examples:



(*b*) Rearrange the exercises written under Task I, according to the suggestions of Task II.

(*c*) Finally, upon a given fundamental bass in sustained or repeated notes, compose new upper parts, using in the soprano neighboring tones only when they add to the interest of the melody.

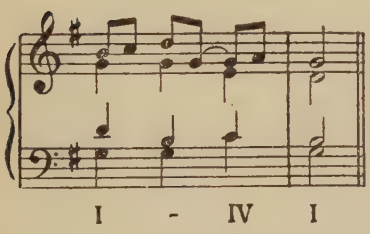
Such a method of writing music upon a single consonant triad in fundamental position is frequently met in short passages. Somewhat rarely an extended composition is so made. The most striking example of this sort is Wagner's

prelude to Das Rheingold, which the student is advised to read in the piano score.

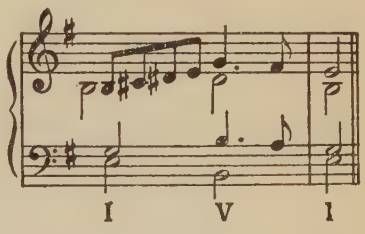
Nearly any simple melody can be set after a fashion in this way, *provided it contains no non-harmonic tones that are left by skip.* Yet unless neighboring tones are used in other parts as well as the soprano, and inversions of the chord are permitted, the effect speedily becomes wearisome.

The two methods of avoiding monotony mentioned in this last sentence can better be left for later study, and the attention of the student now be drawn rather to the advantage of a change of chord. Let the student play over Examples 3 and 4 of Task II as they are written. Then let him play them once more, substituting the following measures at the ends of the examples:

End for Example 3:



End for Example 4:



He will not fail to feel the relief of the shift of chord just before the end. This change of chord before the final accent-chord of a cadence-group is called *the cadence.* Without stopping here to study cadences at length, the student is advised hereafter to close each exercise with one of the two cadences just illustrated. That is, before the final tonic chord in fundamental position upon the accent of the measure, with which he is expected to end every exercise, he may have either the subdominant triad, or the dominant triad, likewise in fundamental position.

The problem of how to move from one chord to the other he will learn in the next lesson.

LESSON II.

PRINCIPAL TRIADS IN FUNDAMENTAL POSITION.

In passing on to a study of the use of different chords it should be stated emphatically that the law of artistic reticence makes it far more valuable to accomplish much with a few chords than to utilize many. It will be the object of these lessons to constantly emphasize how much can be done with slender resources.

Task I.— Tonic and Dominant Triads.

If the consonant chord, with which one starts out, be accepted for what the ear naturally assumes it to be; namely, a tonic triad, the simplest change of chord is to the chord a perfect fifth higher, which is felt to be the dominant triad. This answers the need for harmonic unity and acknowledges the essential independence of consonant triads. That is, granting that inherently every consonant triad is an independent center of tonality, the two such triads which can be made to unite more easily in a single tonality are those with the following requisites:

First.—A tone in common.

Second.— Enough different tones to give distinction to each chord.

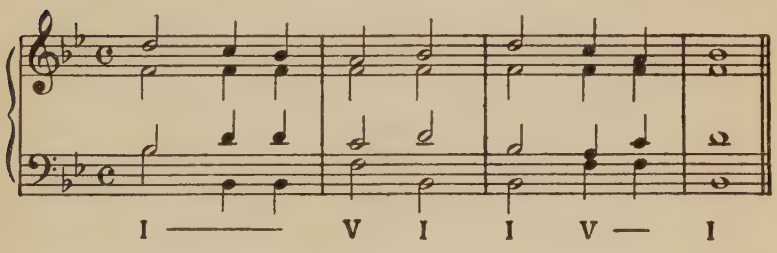
Third.—An inclination on the part of the second chord to return to the first, sufficient to make this latter seem the chief harmony — the real center.

These requisites are found in perfection in the tonic and dominant triads. The root of the latter is present in the tonic chord, while its third lies but a half-step away from the key-note and has such a strong inclination toward this that it is called the leading-tone of the scale.

There are two easy methods of passing from one chord to the other, while obeying the laws of melody and of harmonic balance. The first emphasizes the elements of harmonic unity in the chords, the second emphasizes melodic variety.

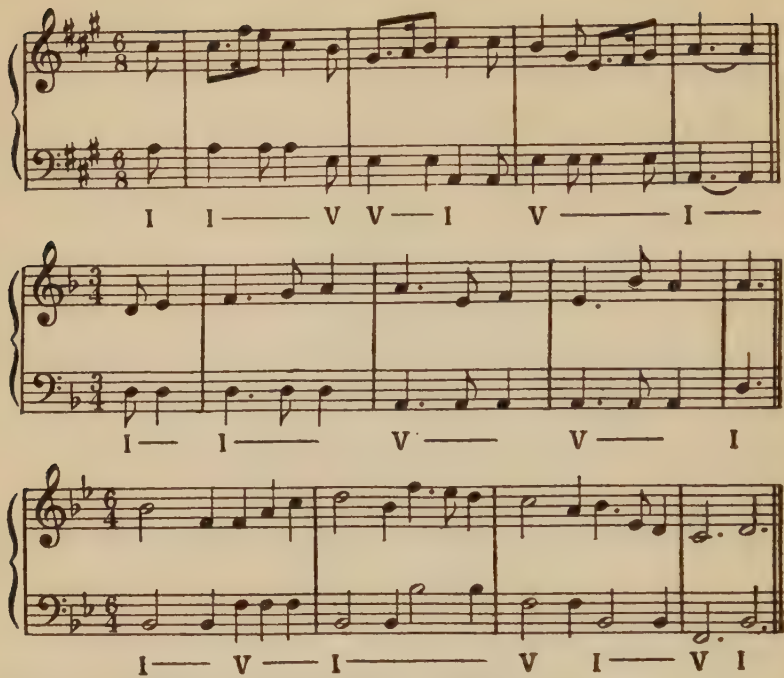
The first, and manifestly the simplest method, is to retain in some upper part the common tone, called the note-of-union, have the other parts move by conjunct-motion to the tones necessary to the new chord, and have the bass skip from one root to the other. The bass has the disadvantage of being unpleasantly angular in melody, but the character of the two chords is clearly emphasized.

Example 1.— Accent-group form,— 1, 2, 3, 4:

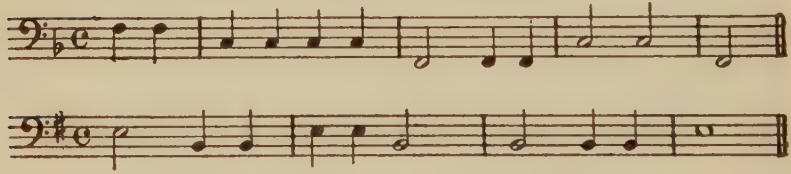


In the example just given it happens that the note-of-union is kept in the alto throughout the piece. If the rearrangements of the same chord had been more varied this would not have occurred.

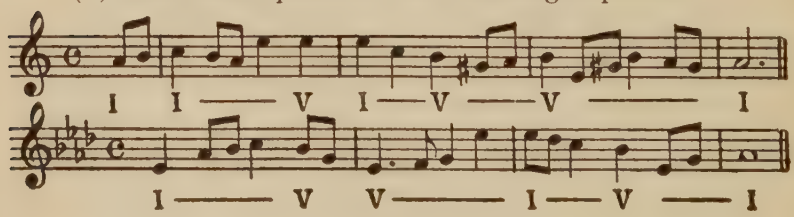
Exercises —(*a*) Add middle parts to the following examples on the next page:



(*b*) Add upper parts to the following basses:



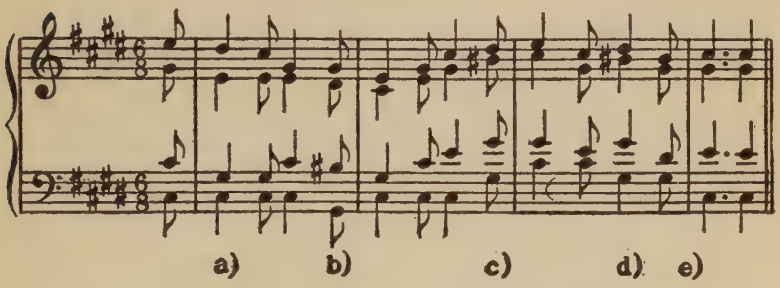
(*c*) Add lower parts to the following sopranos:



(*d*) Finally, compose cadence-groups, some upon previously determined schemes of tonic and dominant chords, some upon an original method based upon the two chords in the way just presented.

Another method nearly as good and as simple, but offering a better chance for variety, is to give up the note-of-union and have all the upper parts move to the nearest notes of the new chord which lie in the direction opposite to that in which they would have gone had the note-of-union been retained. Here it is usually advantageous to have the bass progress in contrary motion to the upper parts.

Example 2.— Accent-group form,— 6, 1, 2, 3, 4, 5:



OBSERVATIONS ON EXAMPLE 2.

[NOTE.— The observations on this and all other examples are as important for the student to read and master as is any other portion of the text.]

a) The neighboring note, ♯d″, could have been a part of the dominant triad if that chord were preferred.

b) Try the upper ♯g, and compare the effect of similar motion of the bass into the following chord.

c) Try the lower ♯G and compare the effect of thus entering the chord, with that written.

d) Try the tenor on ♯d′, and compare the chord thus having its fifth doubled, with the chord as written.

e) Notice the advantage which the bass as written has over the equally correct form with ♯c′.

Exercises.—(*a*) Compose cadence-groups to the following chord-schemes:

Key of F. Accent-group form,— 3, 1, 2:

I | I - - | V - - | I - V | I - ‖

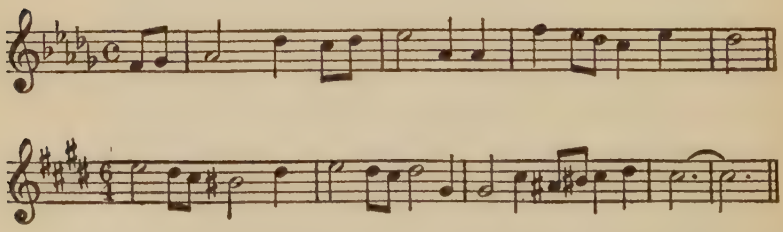
Key of c. Accent-group form,— 4, 1, 2, 3:

I | I - - V | I V I - | V - - - | I - - ‖

[Note.— The vertical lines indicate bars. The dashes indicate beats, throughout which the previous chord may be held, or in which it may be repeated. Remember that the final chord comes on the measure accent.]

Remember that X indicates a major triad; x indicates a minor triad.

(*b*) Write lower parts, choosing the proper chords, to the following soprano melodies:

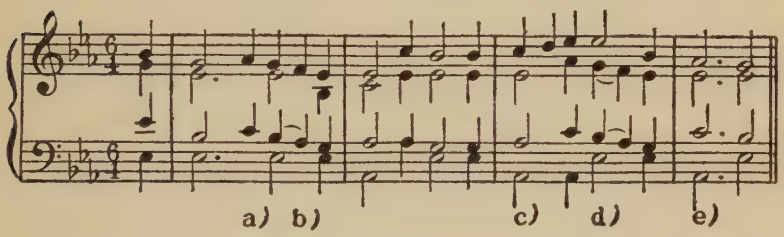


(*c*) Compose cadence-groups, some upon previously determined schemes of tonic and dominant triads, some upon original melodies based upon the two chords, in the way just presented.

Task II.— Tonic and Subdominant Triads.

The other chord nearly, but not quite, as closely related in feeling to the tonic chord as the dominant, is the subdominant triad. Its fifth is present in the tonic chord, while its root lies but a half-step from the third of the tonic chord. The methods of passing from one to the other are the same as have been presented in the case of the tonic and dominant chords.

Example — Accent-group form,— 6, 1, 2, 3, 4, 5:



Observations on the Example.

a) The neighboring tones in soprano and tenor here create an appearance of the subdominant triad. Such cases are frequent in music, and are called passing or accidental uses of the chord.

b) The neighboring tones here do not prevent the clear feeling of tonic chord. They are evidently melodic adornments of it.

c) One might use in the tenor ♭a and ♭b in quarter notes.

d) Passing tones in sixths, such as are found here, or in thirds, as was suggested above, are frequently more useful than neighboring tones in one part alone.

e) Notice the device by which the alto retains the note-of-union and yet the soprano is led downward. The skip of

the tenor, although but a fourth, has the effect of giving momentary and pleasing prominence to this part.

Exercises.—(*a*) Compose cadence-groups to the following chord-schemes:

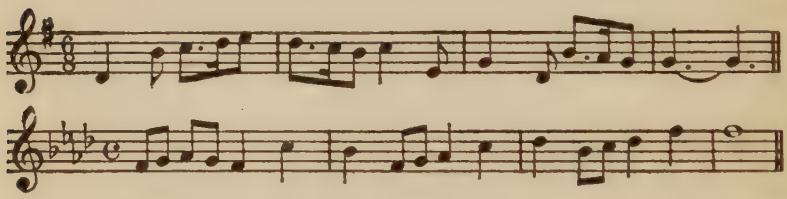
Key of D. Accent-group form,— 1, 2, 3, 4:

I - IV- | I - - - | IV - - - | I — ‖

Key of f. Accent-group form,— 1, 2, 3:

i - - | iv - i | iv - - | i — ‖

(*b*) Write lower parts, choosing the proper chords, to the following soprano melodies:



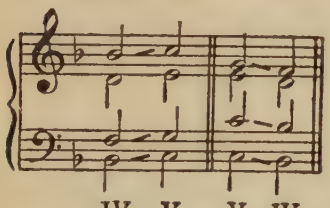
(*c*) Compose cadence-groups, some upon previously determined schemes of tonic and subdominant triads, some upon original melodies based upon the two chords, in the way just presented.

Task III.— Tonic, Dominant and Subdominant Triads.

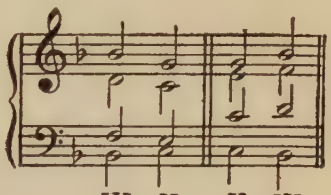
If one desires to write, making use of all three of the chords already discussed, there arises a new condition when the dominant triad follows the subdominant triad, or the subdominant follows the dominant. These triads, since they lie on adjoining degrees, have no common tone. To make the parts move to their nearest tones in the new chord

creates the peculiar motion known as parallel fifths and octaves. (See Lesson XI., Elementary Theory. For example:

Parallel progressions:



Method of avoiding them:



Observe at *a*) parallel fifths between bass and tenor, and parallel octaves between bass and soprano.

b) Parallel octaves between bass and tenor, and parallel fifths between both bass and soprano and also tenor and soprano.

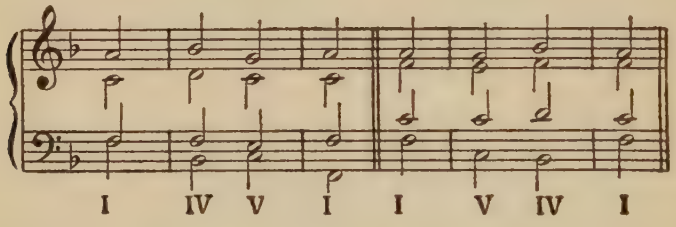
Now the impression produced by these parallels is a double one. It destroys the individuality of one of the two parts in the case of the octaves, and even to some extent in the case of the fifths; and it heightens the independence of each other which all consonant triads have, and those without a common tone especially.

All art effects are a balance of forces, one tending to act in a given direction, another tending to act in a different direction, while the resultant is the valuable compromise. It is not correct, therefore, to say that parallel fifths and octaves are wrong in themselves. But in four-part vocal writing the two important ends, namely, that each part should have its individual melody and that there should be a feeling of continuity and unity to the chords, are hindered by these parallels.

To avoid them one needs only to use what is in effect the second of the two methods already employed in passing

from one triad to another; namely, contrary motion of the other parts to that which sounds the roots of the chords. Observe *c*) and *d*) above.

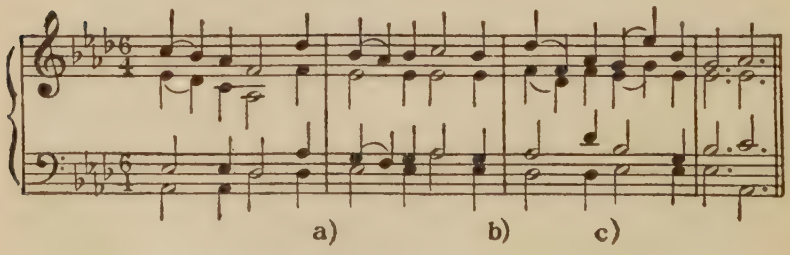
In moving from the dominant triad to the subdominant there is still a noticeable abruptness of effect, even if no objectionable parallels arise. In the following illustration, whatever be the order of the chords, one may see that the subdominant chord seems more remote from the tonic than does the dominant:



Now the effect of approaching the key center always makes for unity of chord feeling; hence the order IV to V seems more natural than the reverse.

As the student's knowledge of chords increases he should always observe the remoteness or nearness of any chord to the tonal center. Harmonic unity is promoted in general by a choice of chords in the following order: from the tonic to any chord desired, however remote; from any other chord in the direction of the tonic.

Example.—Accent-group form,— 1, 2, 3, 4, 5, 6:



Observations on the Example.

Compare the progressions at *a*) and *c*) with that at *b*), where a purposeful break in smoothness is made.

Exercises.—(*a*) Compose cadence-groups to the following chord-schemes:

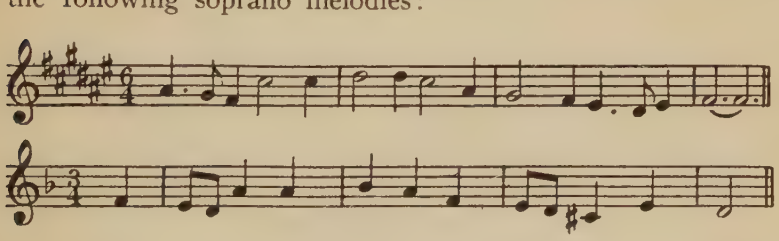
Key of A. Accent-group form,— 5, 6, 1, 2, 3, 4:

I V | I - V I IV - | V - - I - - | IV - I V - - | I - - - ‖

Key of g. Accent-group form,— 4, 5, 6, 1, 2, 3:

i - - | i - - - - - | iv - - - - - | v - - - - - | i - - ‖

(*b*) Write lower parts, choosing the proper chords, to the following soprano melodies:



(*c*) Compose cadence-groups, some upon previously determined schemes of tonic, dominant and subdominant triads, some upon original melodies based on the three chords, in the way just presented.

LESSON III.

PRINCIPAL TRIADS IN INVERSION.

The student has used so far triads in fundamental position. But the constant succession of chords with their roots in the bass, while it gives the impression of clarity in chord structure and so of strength to the music, also soon becomes

monotonous. This is due mainly to the angularity of the bass part. Especially is it true if one be restricted to the use of principal triads only.

Yet without enlarging the number of chords there is still a possibility of enjoyable melody in the bass if some of the chords be inverted. (See Lessons in Elementary Theory, pages 187-189.) In making choice of when and how to use inversions the following observations are of value. They apply equally well to other triads than those at present under consideration — the principal triads:

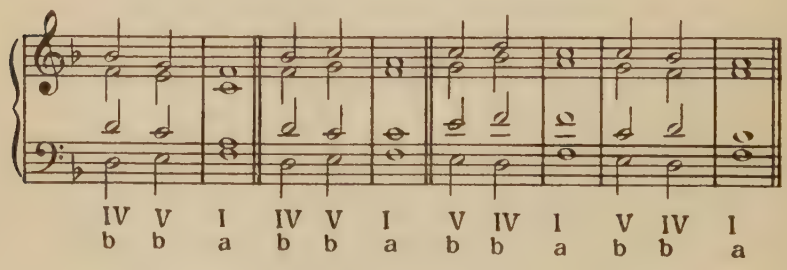
1. A chord in inversion loses in strength, but may bring variety to the music, or allow the bass a smoother melodic line, or both.

2. In cadences the loss of strength is apt to prove a defect; hence fundamental position of both chords is the rule.

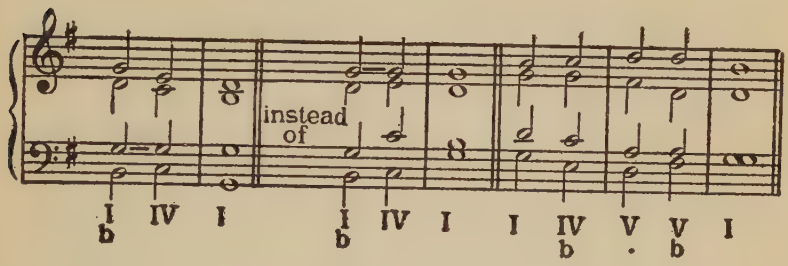
Task I.— First Inversions.

3. When chords on adjoining degrees are both in first inversion, if the upper parts go in contrary motion to the bass (in this case the thirds of the chords), both chords may have the doubled third; but if the upper parts go mainly in parallel motion to the bass but one of the chords can profitably have the doubled third.

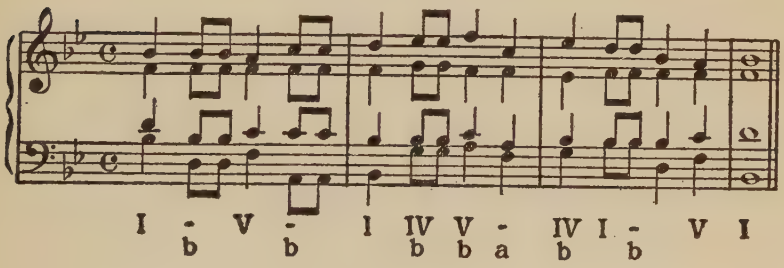
Remember that on the whole a chord in first inversion sounds best with root doubled at octaves:



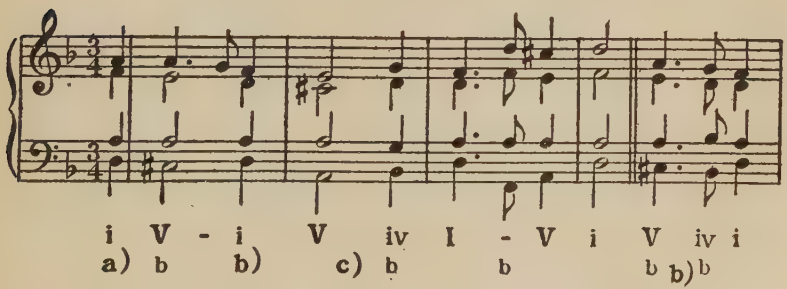
4. When chords whose roots are a fourth apart follow one another with one of the chords in first inversion, it is better that the note-of-union should be so held as to allow contrary motion of the other parts:



Example 1.—Accent-group form,—1, 2, 3, 4:



Example 2.—Accent-group form,—3, 1, 2:



Observations on Example 2.

a) The opening chord has its fifth doubled in order to bring smooth progression into the best arrangement of the following chord. Such a treatment is in common usage.

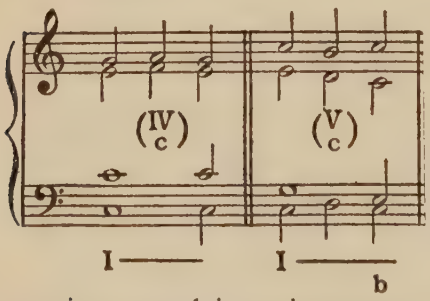
b) The augmented second, which lies between the sixth and seventh degrees of the harmonic scale, always causes a difficulty in the progressions V iv, V iv, or iv V, hence the harmonization of the second measure with g′ as a passing-tone is preferable to that given at the end of the line.

c) Notice, however, that the progression iv V, or V iv, is perfectly smooth.

Exercises.—Rewrite the examples given in Lesson II. and those made by the student under the tasks of Lesson II., introducing first inversions wherever it seems advantageous musically.

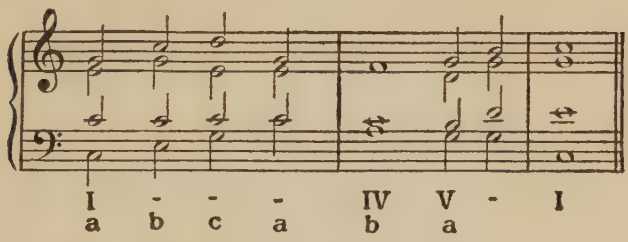
Task II.— Second Inversions.

5. Second inversions of consonant triads have the least effect of stability which can be in combinations of intervals wholly consonant. In order to render them satisfactory there should be particularly melodious movement of the parts into and out of them. Except where they occur accidentally through the use of neighboring tones in several parts, for example:

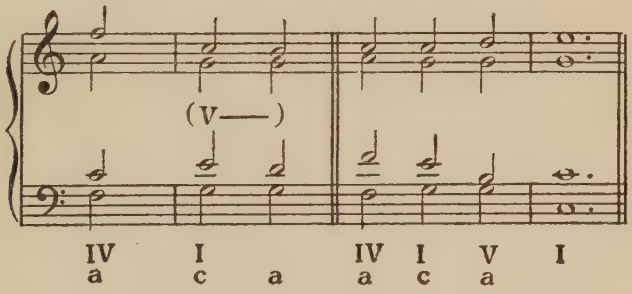


the student is advised to use them but seldom, and then in single instances, between chords in other positions. Skips in the parts in moving out of second inversions are rarely good, and skips in the parts in entering second inversions occur commonly *only in the two following instances:*

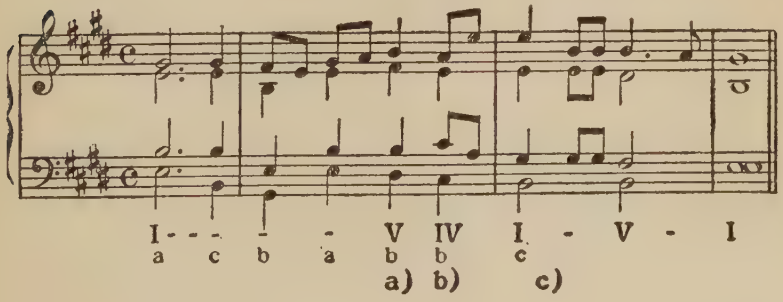
(*a*) When the second inversion comes in a series of repetitions of the same chord:



(*b*) When the second inversion of the tonic chord has its fifth doubled, and is followed immediately by the dominant chord in fundamental position. This case is in fact usually an illustration of the dominant chord approached through two neighboring tones:



Example 1.—Accent-group form,—1, 2, 3, 4:



Exercises.—(*a*) Compose cadence-groups to the following chord-schemes:

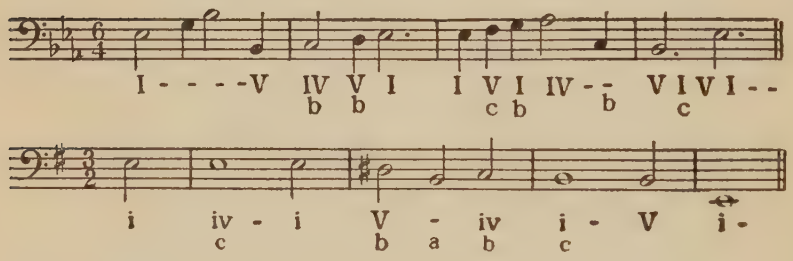
Key of D. Accent-group form,—4, 1, 2, 3:

I | I - I IV | V - I - | I - V - | I - -

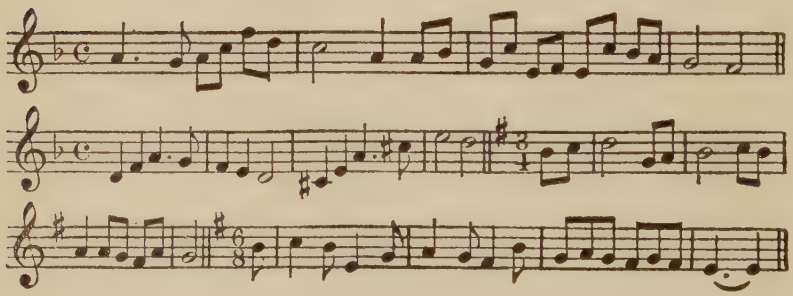
Key of e. Accent-group form,— 3, 4, 1, 2:

V - | i - V iv | iv i V i | iv - V - | i -

(*b*) Write upper parts to the following basses:



(*c*) Write lower parts to the following sopranos, using as seems best, tonic, dominant or subdominant triads, and in fundamental positions or in suitable inversions:



LESSON IV.

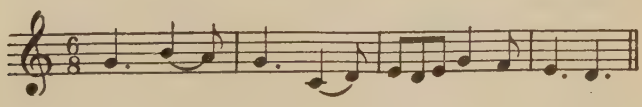
HARMONIZATION OF MELODY.

In the Soprano, with the Harmonic Material Already at Command.

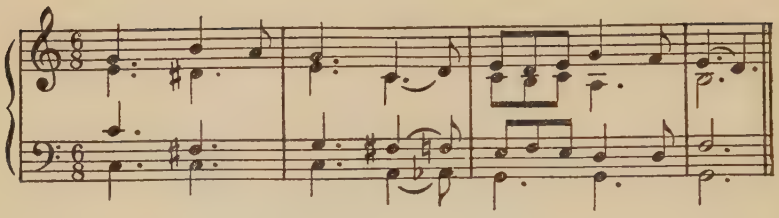
By the use of the three chords already treated, in inversions or in fundamental position, and with the aid of neighboring tones, one may not only construct much music of a simple nature, but can harmonize any diatonic melody and even some chromatic melodies. The harmonization, to be sure, will not always prove to be the one to which the mind had adjusted itself on first hearing (or creating) the melody; for melodies, like word phrases, frequently come to our minds through a half remembered association of meaning, and the original harmony is a part of the memory. The change of harmony may alter quite the effect of the melody itself.

Apart from this difficulty there is no reason for postponing the task of harmonizing a melody. As the later lessons present to the student new chord effects, gradually and naturally there will come greater freedom in harmonization.

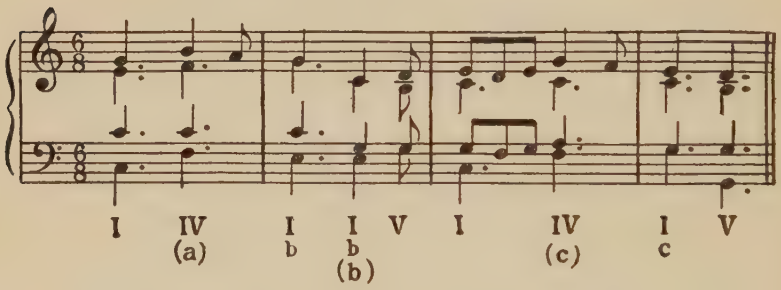
An illustration of the preceding paragraph may be given, as follows: We wish to harmonize the following melody:



Let us suppose that it has been associated in thought with the chromatic harmony here given, but which uses means not yet at the disposal of the student:



It is still possible, by the use of diatonic chords already familiar, to present the melody harmonized in a way that is adequate and not unpleasant to one whose mind had not already been made to hear the first harmonization:



In regard to this latter harmonization, notice at

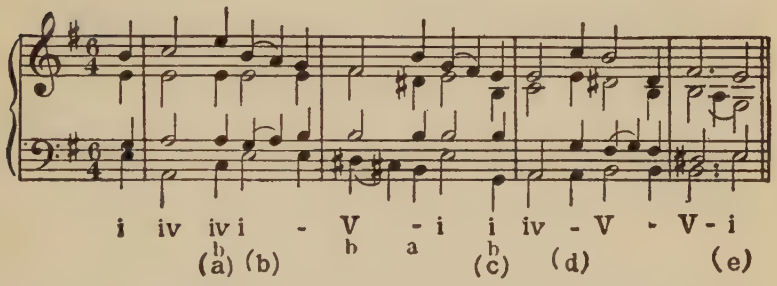
(*a*) That the subdominant chord was chosen rather than the dominant, although *b'* belongs in the latter chord. If I V had been chosen the advantage of holding a note of union in passing from one chord to the other would be lost.

(*b*) That $\underset{b}{\text{I}}$ repeated allows the wide skip in melody to come on the same chord. This would not have been possible with V I, although the first three chords might well have been I IV V.

(*c*) That it would have been an equally good harmonization of the *g'* to use I and to change to IV at the note *f'*.

Again, the following example of the harmonization of a diatonic melody in a minor key illustrates the method of work.

[NOTE.— Study these examples with great care, and let no observation pass without getting its meaning.]



Notice at (*a*) that the smaller skip from *c″* to *e″* has the same chord, instead of the larger skip *e″ b′*. This is because it is more effective to make the change of chord on the accented beat.

(*b*) That the passing tones in two parts through the octave are good.

(*c*) That the alto moves down to *b* to avoid the roughness of having the soprano lose itself in the sustained *e′*, as would have happened had the alto remained there. Still, by the change the *b* of the second chord is made a trifle too prominent.

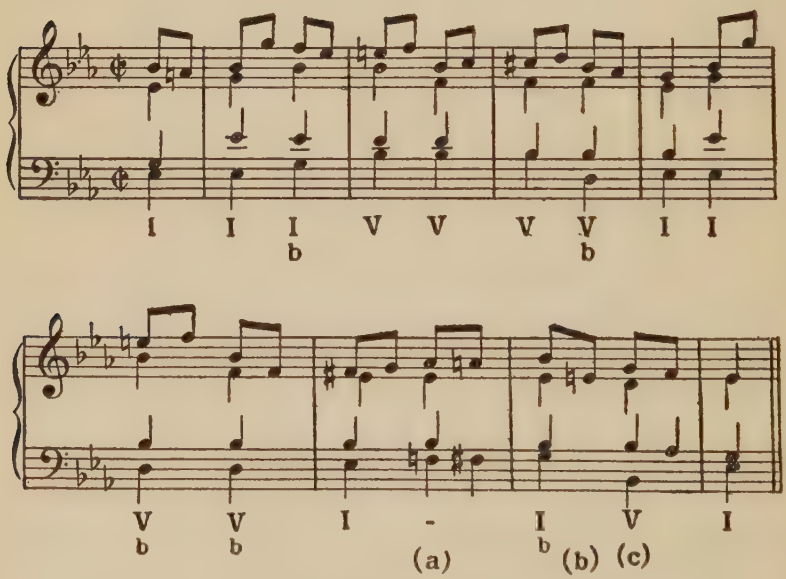
(*d*) The non-harmonic *g* in tenor, while alto and soprano take a new position of the chord, is of interest because we shall meet later exactly the same combination of notes as a real chord. Observe also that the wideness of skips in melody makes the harmonization of this measure by iv — V — better than i iv i V.

(*e*) That the new movement of the melody and the fact that both tenor and bass are pretty low makes it better to have the final chord omit its fifth and triple the root, than

e′
to stand, for example, g
B
E

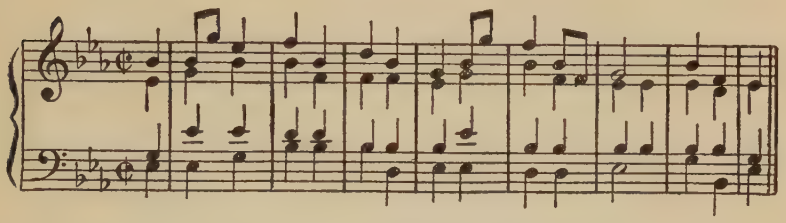
While every diatonic melody can be harmonized in the ways suggested above, only a few chromatic melodies respond to such a treatment; namely, those in which the chromatic notes can be regarded as neighboring tones.

An example of a chromatic melody harmonized in this way, with the material already familiar to the student, here follows:



Notice that the neighboring tones come some of the time on the beat and some of the time after the beat. No-

tice also, that if the neighboring tones were left out of the exercise, it would be a good illustration of Lesson III.:



The last three measures call for special remarks:

At (*a*) two neighboring tones follow each other in scale progression before the next chord tone arrives, and corresponding neighboring tones in the bass, in parallel thirds, help to make this movement enjoyable.

At (*b*) two neighboring tones (♮e′ and g′) follow each other by skip, each approaching the chord tone f′ in opposite directions. This is a double appoggiatura. Notice the peculiar effect of the ♮e while ♭e is still sustained in the alto.

At (*c*) the neighboring tone in the soprano comes on the beat, while a neighboring tone after the beat is added in the tenor. These two effects are explainable as real chords also, as the student will see later. It is often true that good harmonic effects are justifiable for several reasons.

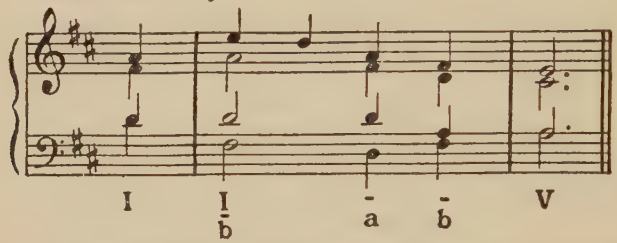
In connection with the illustrations just given a few rules of guidance may be added:

1. A note of the melody can be treated either as a chord tone (root, third, or fifth); or as a neighboring tone, provided that the note which follows is a whole or a half-step above or below the given note.

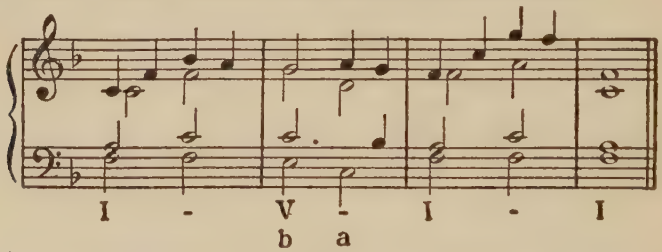
2. In general, a simple melody is harmonized better by the use of some neighboring tones with the chord tones than by chord tones wholly.

3. When harmonizing skips it is better to find a chord that contains both notes and make the skip as a passage from one arrangement of the chord to another. (Compare rule 6).

4. Sometimes a skip can be harmonized as a movement from a chord tone to an accented neighboring tone of the same chord. Thus the first five notes of this example can have the same harmony:

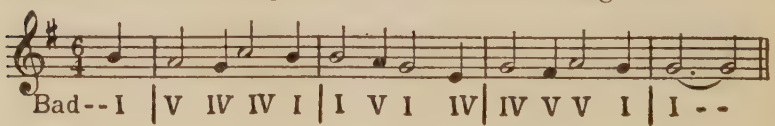


This is especially to be observed when two wide skips in the same direction follow each other in such a way that not all three notes could come into the same chord:



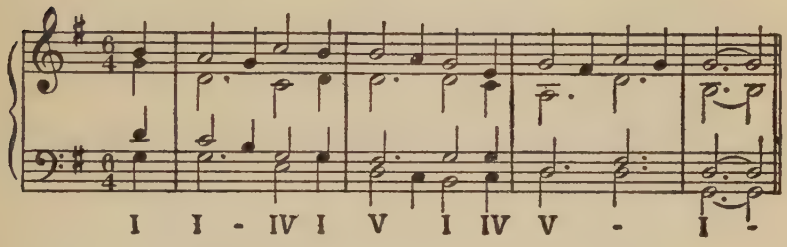
5. In general also, it is best to get along with as few changes of chords as possible; except that

6. A chord introduced on an unaccented part of a measure should change with the new following accent:



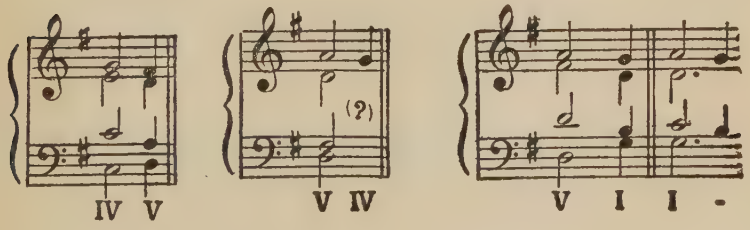
Better I	V I IV I	V - I IV	V - V - I	I -
Best I	I - IV I	V - I IV	V - - - - -	I -

The frequent and obvious exception to the exception just stated is shown in this very example; namely, that an unaccented chord at the beginning of a musical phrase is frequently the same as the following accented chord, and that a final accented cadence-chord is sometimes anticipated by a short preliminary statement of it. Sometimes this anticipation does not include the whole chord, as in the last harmonization indicated above, and written out below:



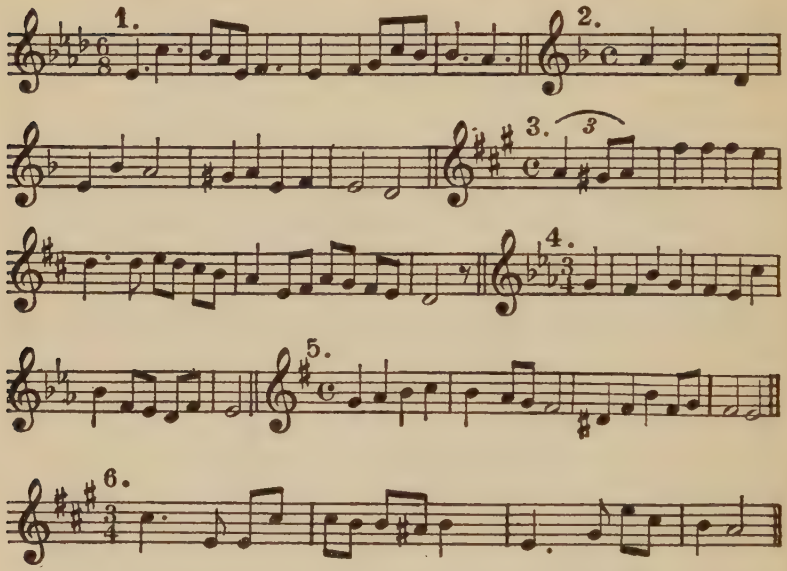
7. In choosing chords for notes in conjunct-motion, be sure that the melody follows the natural direction of the parts in uniting these chords. Thus a harmonization of adjoining degrees in such a way that both tones are the fifth of the chord is poor, because the natural motion of the parts in uniting such chords would not produce this arrangement:

This is good: This is bad: These two are both good:



Exercises in Harmonizing Melodies in the Soprano.

1. Harmonize the following melodies in the soprano:

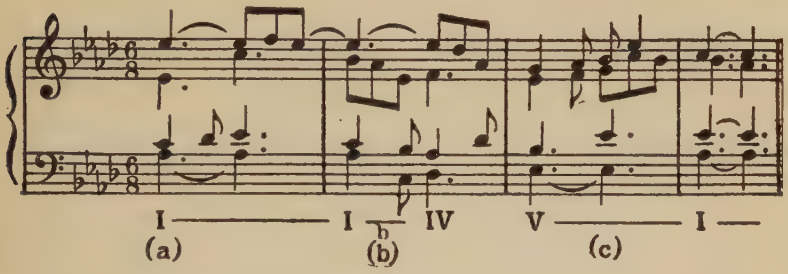


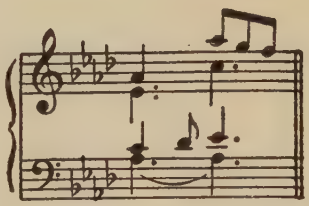
2. Write similar melodies a cadence-group in length, and harmonize them in the soprano.

In the Lower Parts, with the Harmonic Material Already at Command.

It is usually the case that melodies in the lower parts have less freedom both as to range (extent of melody) and as to width of skips. If, for example, an alto passes quickly from a low to a very high note it is more difficult to harmonize it so that the chords are well balanced and the tenor

and bass are melodious. (See Elementory Theory, Lesson XI., on arrangements of chords.)



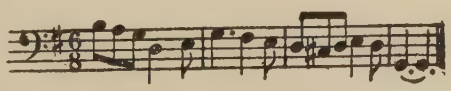


(*a*) The best arrangement of the chords in the first measure would be as follows: In order, however, to save the wide skip to a very high note in the soprano, it seemed wiser to have the fifth of each chord doubled. Also the somewhat monotonous soprano allows the interest to turn to the melodious alto.

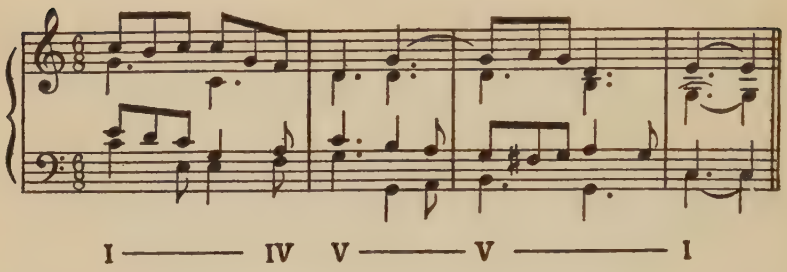
(*b*) There are quite a number of neighboring tones in this harmonization. Notice the one in the tenor here, which enters just as the bass changes.

(*c*) At the accented beat the chord is complete but it omits the third at the next beat in order to retain the bass and so get a stronger cadence.

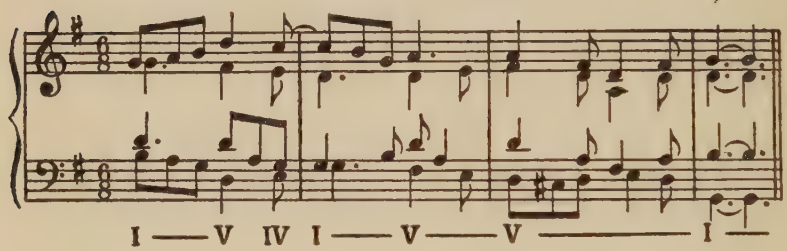
Melodies that are limited in range and without wide skips offer no difficulty to harmonization in inner voices; and if in addition they finish with the fundamental notes of the cadence chords, they can be harmonized as basses, e. g.:



Transposed to key of C, and used as a tenor:

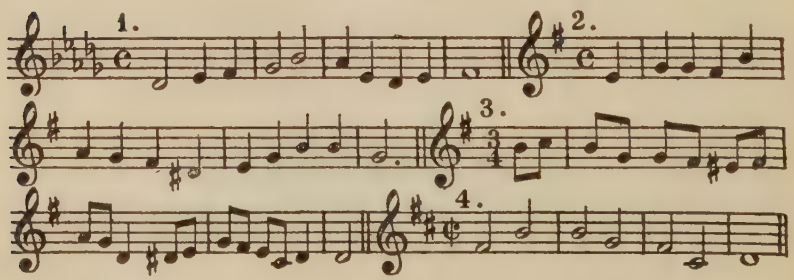


In the original key used as a bass:

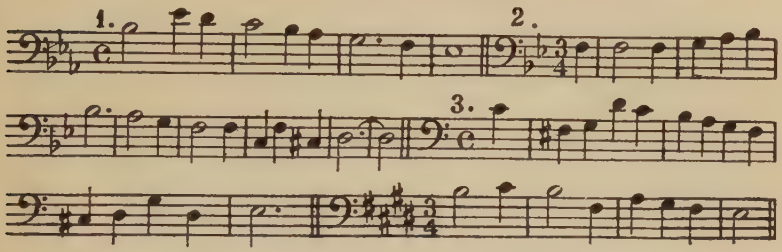


Exercises in Harmonizing Melodies in Lower Parts.

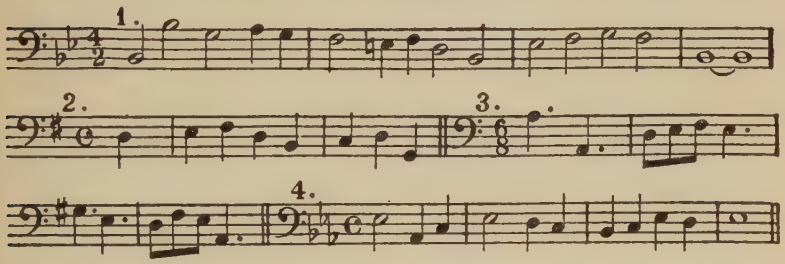
1. Harmonize the following melodies in the alto:



2. Harmonize the following melodies in the tenor:



3. Harmonize the following melodies in the bass:



4. Write similar melodies and harmonize them in the alto, tenor, or bass as seems most suitable.

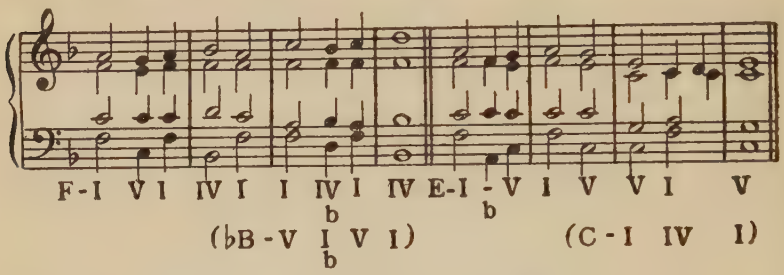
LESSON V.

THE DISSONANT TENDENCY-CHORDS TO THE TONIC.

Key Balance Through Triads.

In the use of the three principal chords of a major key it is a comparatively easy task to retain the tonic chord as the most important — the central chord. Nevertheless an easy demonstration can be made of the possibility of upsetting that center, since consonant triads have in fact several

possible meanings. (Review here carefully Elementary Theory, Lesson XI., Location of Chords.) For example:



In the two illustrations given, although the chords used are all in the key of F, it would be easy to believe that the last two measures of the first illustration were in ♭b, and of the second in C. Such a possibility demonstrates the fact of the essential independence of these consonant chords. The purpose to treat them, one as tonic, the others as dominant and subdominant, is the sole reason that makes it important to follow any particular order in choice of them.

Dissonant Chords Showing Tendency to the Tonic.

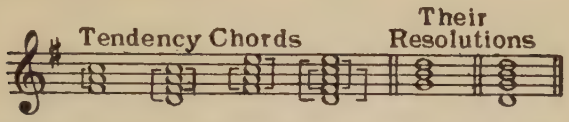
In sharp contrast to these chords are the DISSONANT CHORDS, most of which are not only unstable, but also show more or less strong inclination to issue in particular chords, known as their resolutions. Of the dissonant chords those which incline toward the tonic chord are the most important, since they supplement the lack of definiteness of a series of consonant chords, by clearly pointing toward the tonal center. When they appear the tonic chord seems imminent. Not that it is positively necessary to follow such a dissonant chord with the tonic chord, but unless one does there is a distinct sense of disappointment of expectation — the natural thing is to have the tonic chord follow.

The four chords of the major or minor keys which have natural resolution (inclination) into the tonic chord are the

LEADING-TONE TRIAD, the DOMINANT SEVENTH-CHORD, the LEADING-TONE SEVENTH-CHORD, and the DOMINANT NINTH-CHORD.

A study of the intervals of these chords will make clear why they show this inclination to issue in the tonic chord.

In the key of G:



In the *leading-tone triad,* root is dissonant with fifth, while the possibility of half-step movement of the root to the most important scale note (the tonic) furnishes both a melodic inclination and a new root.

The *dominant seventh-chord* contains in itself potentially the dominant triad (which has already been shown to be the consonant triad most closely related to the tonic triad), and the leading-tone triad just discussed. The seventh of the chord is seen to be doubly dissonant; namely, with the root and with the third. Its inclination to move the half-step progression downward is thus sharply accentuated.

The *leading-tone seventh-chord* has all the inclination found in the leading-tone triad, while its root is still more strongly inclined because of its double dissonance.

The *dominant ninth-chord* has the combined inclinations of the three other chords,— four of its tones being doubly dissonant.

Doubling and Omission of Tones in the Dissonant Tendency-Chords.

In the dominant chords the dominant note is note-of-union to the tonic chord, while the supertonic note, since it is the perfect fifth of the chord, may be omitted and the root be doubled instead. This is often an advantage in the dominant seventh-chord when it is in fundamental position; for

it allows that statement of the root which is in an upper part to remain as note-of-union and that which is in the bass to skip to the new root. In the dominant ninth-chord when it occurs in four-part writing the fifth is omitted of necessity, and no doubling arises.

It should be noticed that the only tone which is not dissonant in any of the chords is the second of the scale (supertonic). It therefore is without special inclination, and may move either up to the third of the tonic chord or down to its root. Also, it may be freely doubled. This cannot happen so well with the other notes of these chords, except as stated in the paragraph above; since notes which have strong inclination in a particular direction, if doubled, either produce parallel octaves in the resolution, or cause one of the notes to move in the wrong direction thus disappointing expectation — neither of which outcomes is enjoyable.

In the two leading-tone chords the fifth is the less important dissonant tone, and is sometimes doubled, one part moving to the third of the tonic chord, the other to the fifth. This freedom of the supertonic and subdominant notes in the leading-tone chords makes it always possible to avoid the parallel fifths which may arise in the resolution of a chord on one degree to that on the next, as is the case here.

In the dominant seventh-chord its third (the leading-tone) is the least important dissonance, and although it is almost never doubled, frequently the movement from it (when it is an inner part) is down to the fifth of the tonic chord instead of up to the root (the natural inclination).

Beauty and Availability of the Dissonant Tendency-Chords to the Tonic.

Although the four chords under discussion are all tendency-chords to the tonic triad, there is marked difference in the beauty and availability of them.

The leading-tone triad is rarely enjoyable except in first inversion, and even then cannot always find a satisfactory arrangement. It has gradually been abandoned by musicians in favor of the much fuller and more readily handled dominant seventh-chord which admits of every position and inversion and is unmistakable as to key.

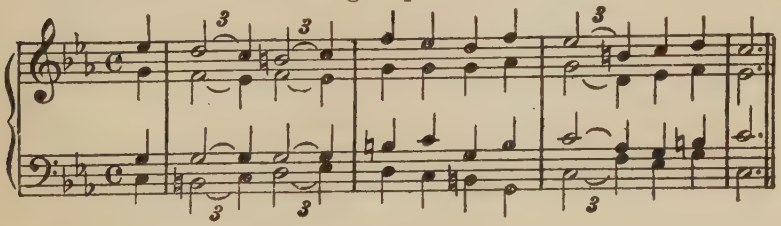
The leading-tone seventh-chord is not so beautiful nor so strong a chord as the dominant seventh-chord, and is much less frequently chosen.

The dominant ninth-chord, while in some respects the richest and most definite of the four, is, nevertheless, more difficult to handle, partly because it does not admit inversion so readily. (See Elementary Theory, Lesson XI., Inversions.)

The addition of these chords to the vocabulary of the student gives at once a wider range of choice both in constructing chord-schemes and in harmonizing melodies. Still more importantly it offers a certain voluptuous charm through the raising and satisfying of expectancy, as well as through the sensuous color of the chords themselves.

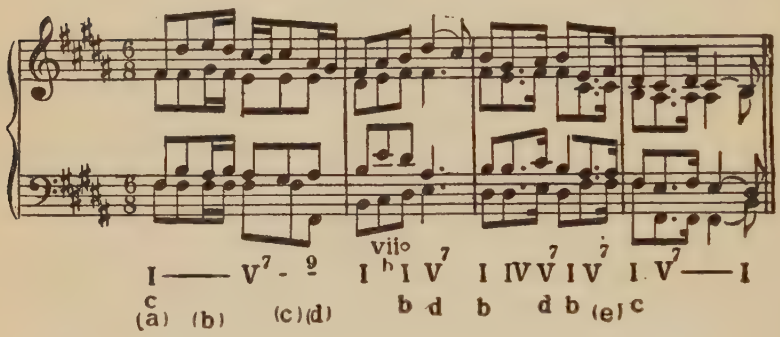
A purely esthetic consideration comes at once to the foreground. *Henceforth if the student wishes to preserve strength and solidity of style he will avoid the tendency-chords, while if he wishes to render his music more graceful or more passionately he will utilize them.* Heretofore grace and lightness have been obtained through the use of the neighboring tones: now without them much the same effects can be gained, and with them still more certainty of design is attainable.

EXAMPLE 1.—Accent-group form,—4, 1, 2, 3:



Notice that the final chord omits its fifth rather than have the leading-tone in the tenor disappoint its tendency. The return to g would have been the more unsatisfactory since the tenor just moved from there.

EXAMPLE 2.—Accent-group form,— 1, 2, 3, 4, 5, 6:



Notice at

(*a*) That the unharmonized note awaits its interpretation which is shown to be the fifth of the major scale by the second melody note and its chord.

(*b*) The three non-harmonic tones create in fact the dominant ninth-chord and they receive the proper resolution as such, but at

(*c*) The non-harmonic ♯*g* is not the ninth of the dominant ninth-chord either by position or resolution.

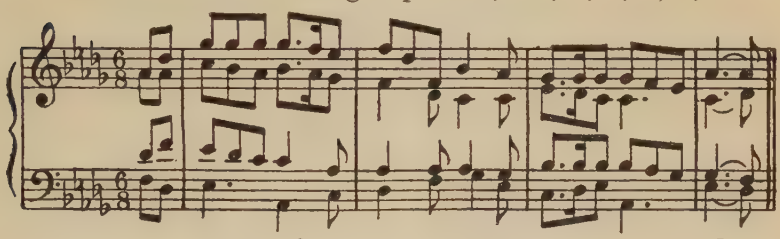
(*d*) This chord is a ninth and not a seventh, for the soprano ♯*a'* is treated as a non-harmonic tone moving into the ninth, else it would have moved upward in the outer voice and also the tenor in such case would not have doubled the leading-tone.

(*e*) The momentary omission of the seventh *e'*, before its resolution to ♯*d'* is quite common.

Interchange of Tendency-Chords to the Tonic.

One interesting result of the common destination of the group of chords under discussion is that not only can they each, like all chords, be repeated as often as desired in various positions before moving to the resolution, but they may be exchanged for each other in place of repetition, the last one having its proper resolution.

Example 3.—Accent-group form,— 5, 6, 1, 2, 3, 4:



I vii° V7 V9 V7 I V9 V7 vii°7 V9 7 V7 I

Exercises in the Use of Tendency-Chords to the Tonic.

(*a*) Compose cadence-groups to the following chord schemes:

Key of ♭E. Accent-group form,— 1, 2, 3:

I V7 I | V7 - I | V9' - -7 -7 | I - - ||
b c b

Key of f. Accent-group form,— 4, 1, 2, 3:

i | vii° i iv - | v9 7 7 vii°7° | i - - v7 | i - - ||
b b b c

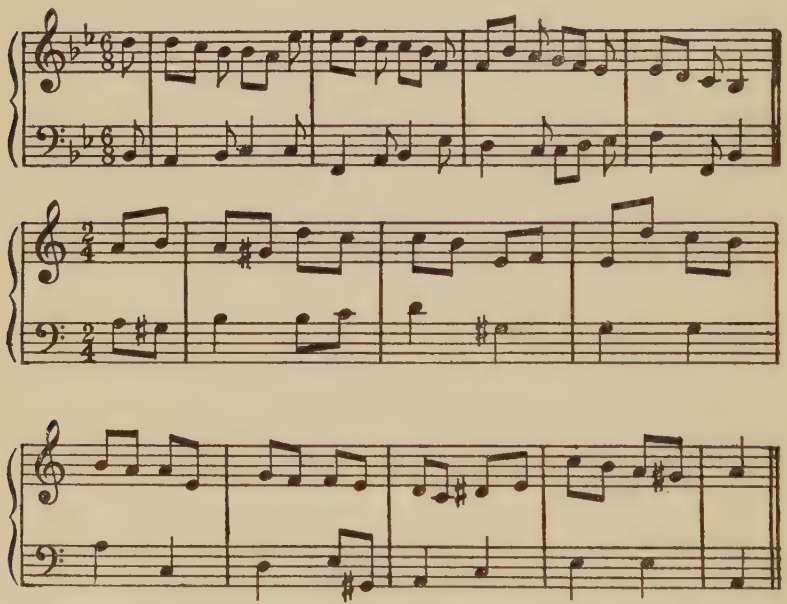
Key of A. Accent-group form,— 1, 2, 3, 4:

I - - IV | V -7 I - | V9 I V -7 | I - - - ||
b b b c

Key of d. Accent-group form,— 1, 2, 3, 4, 5, 6:

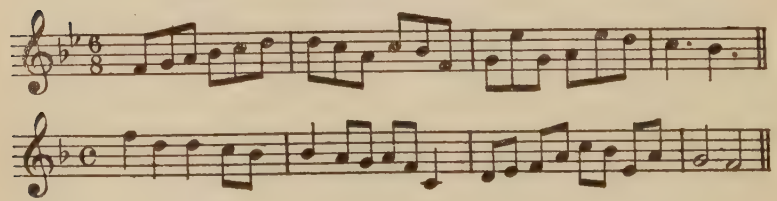
$$\text{i - - }\underset{\text{b}}{\text{V}^7}\text{ - i} \;\Big|\; \underset{\text{c}}{\text{V}^7}\text{ - - - vii}^{\circ 7\circ} \;\Big|\; \underset{\text{b}}{\text{i - - V}^9}\text{ - - }^7 \;\Big|\; \text{i - - - - -} \;\Big\|$$

(*b*) Add inner parts to the following sopranos and basses using wherever possible tendency-chords to the tonic, and neighboring tones with both the tendency-chords and the principal triads:

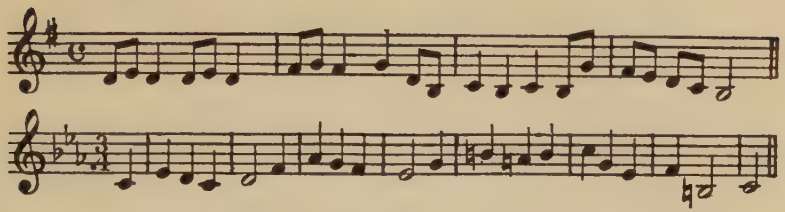


(*c*) Harmonize the following melodies in similar manner:

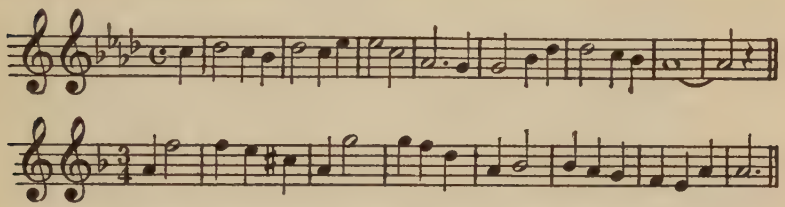
For soprano:



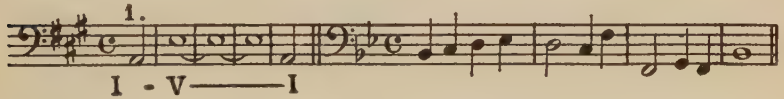
For alto:



For tenor. (See Elementary Theory, Lesson I., for this notation of the tenor part. In harmonizing, it can be transcribed to the bass clef.)



For bass. Write the upper parts of the first bass melody in quarter notes, four chords to the measure, except the cadence measure:



(*d*) Compose melodies, a cadence-group in length, and harmonize them each twice; first without tendency chords, then with them, comparing carefully the results, and noting the effects of grace, strength, etc., obtained.

LESSON VI.

SUBORDINATE CHORDS.

The group of chords so far considered; namely, the principal triads, and the tendency-chords to the tonic, are the chords which can display most firm allegiance to a key.

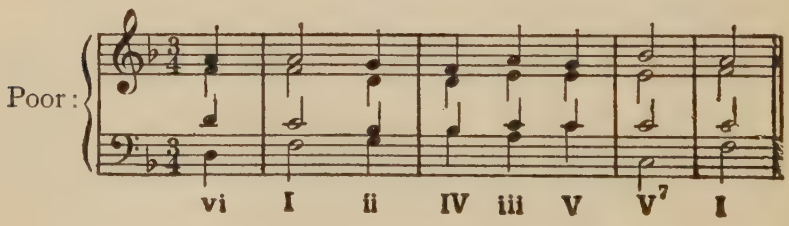
By far the larger part of simple diatonic writing is made up of them.

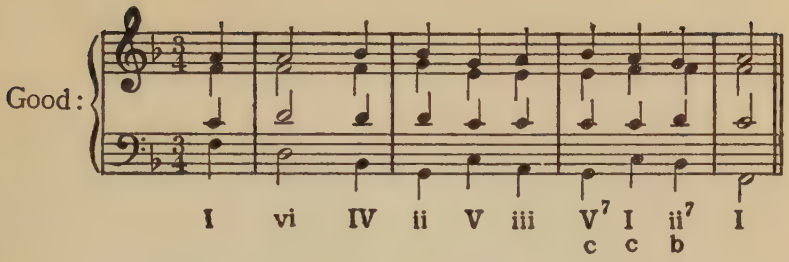
Other triads and seventh-chords of the scale are called SUBORDINATE. They not only occur less frequently, but also have their main function to serve as alternates, or substitutes for the principal-chords. Such a chord *used as an alternate* is given all the distinction possible as a chord, in order to make the contrast to its principal-chord evident. Such a chord *used as a substitute* is made to seem as nearly as possible like the principal-chord, yet retaining its own notes.

The subordinate-chords of a key are each related to its principal in the following way: the root lies a third below the root of the principal-chord, and hence all the other notes of the subordinate-chord are those of the principal. Thus the submediant-chord is subordinate to the tonic; the mediant to the dominant; and the supertonic to the subdominant.

It is from this fact that the movement from the subordinate-chord into its principal has a singularly weak and ineffective feeling — all the natural strength of the principal-chord seeming to be sapped by thus presenting it merely as an incomplete subordinate-chord. On the contrary, the movement from a principal-chord to its subordinate, when they are each in fundamental position, emphasizes the contrast in the two chords.

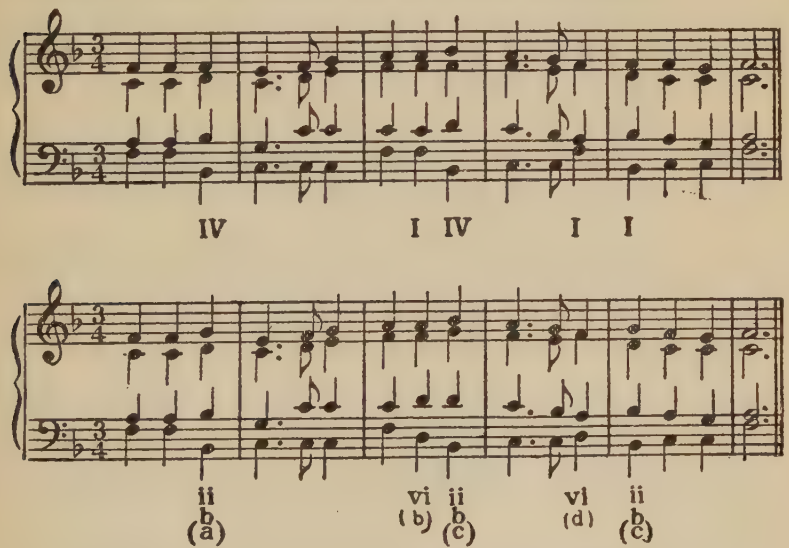
For the reasons just given a subordinate-chord is used either in place of its principal (i. e., when the principal might have been used), or follows it; *but rarely precedes it*:





In general, too, the value of subordinate-chords is in inverse ratio to their frequency.

The use of subordinate-chords *as substitutes for the principal-chord* admits a certain special treatment that can best be explained by illustration. The student is asked to compare, chord by chord, the following examples:



In the second setting, which is the familiar first-strain of "God Save the King," notice at (*a*) the soprano g′ substituting for f′ makes the chord ii instead of IV.

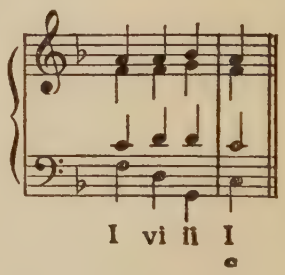
(*b*) The tenor d′ and bass d offer the triad iv as alternate for I with distinct new effect.

(*c*) The alto g′ substitutes for f′, as before at (*a*).
(*d*) The bass d again presents vi as alternate for I.
(*e*) Same as (*a*).

The *substitute-chord* is always used in a way to emphasize the root of the principal-chord. It takes the root of the principal-chord as the bass and usually doubles it for the sake of emphasis. The *alternate-chord* on the other hand is meant to offer its own effect without disguise, as a means of variety. It emphasizes its own root and often appears in an accented part of the measure.

Thus the three uses of ii in the example quoted have really a strong subdominant character, while the two appearances of vi are *contrasted* with I, which would naturally have followed the chords preceding.

If one alters the last chord of the third measure from first inversion to fundamental position it is possible thus to observe the distinction between substitute and alternate usage:



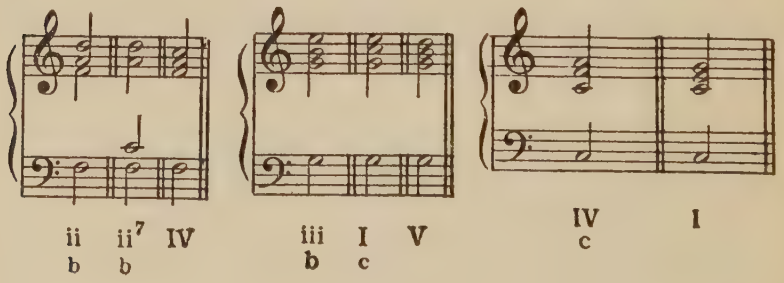
In this way the ii is made to lose the subdominant feeling and becomes a simple alternate for the IV.

The substitute-chords most common in a key are:

ii and ii^7 as substitutes for IV,
$_b$ $_b$

iii and I as substitutes for V,
$_b$ $_c$

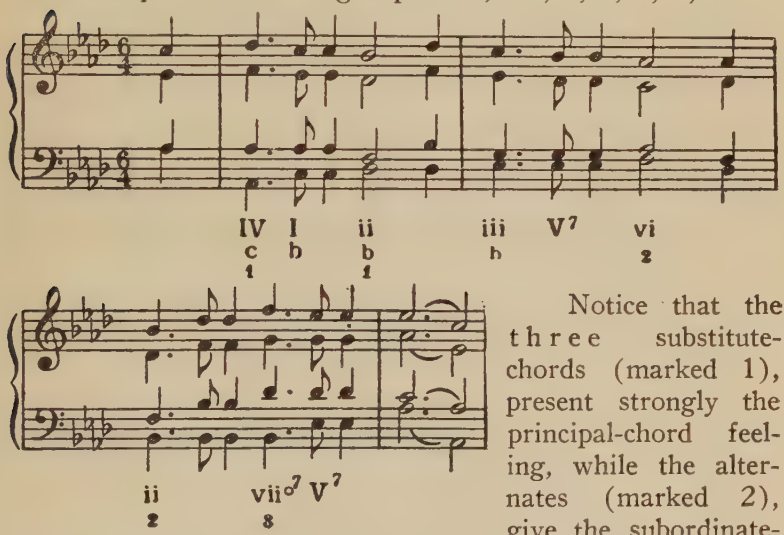
and IV as a substitute for I,
$_c$



The last three substitutes usually are mere preliminaries to the chord itself, the substitute notes being neighboring tones that resolve afterward into the proper chord tones.

Certain further observations need to be made later in regard to subordinate seventh-chords, and as to the use of the mediant triad. The student is requested, therefore, to confine his exercises at present to the subordinate triads vi and ii, and to the substitute-chords listed above.

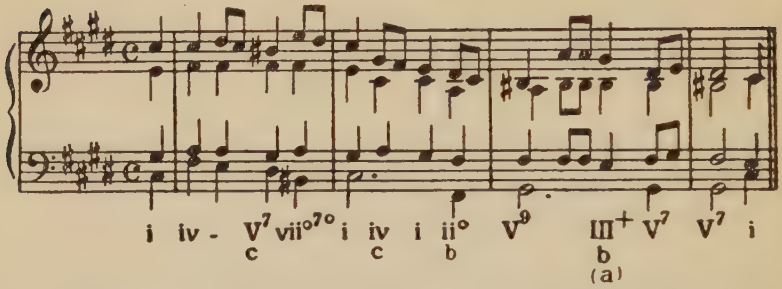
Example 1.—Accent-group form,— 6, 1, 2, 3, 4, 5:



Notice that the three substitute-chords (marked 1), present strongly the principal-chord feeling, while the alternates (marked 2), give the subordinate-chord feeling so manifestly that it is a relief to return to the principal-chords at the end and so restore key-balance (tonality).

Notice also, that the submediant-chord (vi) is acting not alone as a means of variety, but it actually serves as resolution-chord to the dominant seventh-chord. This is possible because it can happen without disturbing the movement of the tendency tones. (The student is requested to think out the objections to using the vi as resolution-chord to vii°, or to V°.)

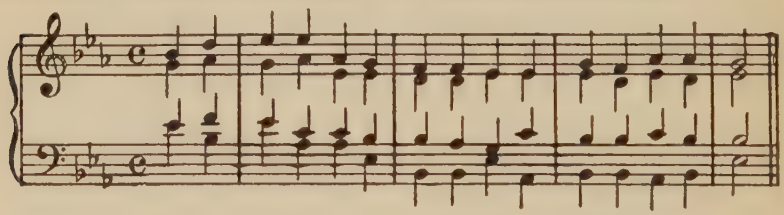
Example 2.—Accent group-form,—4, 1, 2, 3:



Notice at (a) that the $\underset{b}{\text{III}}^{+}$ as a *substitute chord* is also interchangeable among the tendency-chords to the tonic. This would be equally true of $\underset{b}{\text{III}}$ in the major keys.

EXERCISES IN THE USE OF SUBORDINATE-CHORDS.

1. Re-write the following cadence-group, replacing principal triads with subordinate-chords, wherever they seem available, either as alternate or as substitute-chords:



2. Compose cadence-groups to the following chord-schemes:

Key of G. Cadence-group form,—4, 1, 2, 3:

$$\text{I } \underset{b}{\text{ii}} \,|\, \text{V } \text{V}^7 \,|\, \underset{b}{\text{iii}} \text{ V}^9 \,|\, \text{I} - \,\|$$

Key of f. Cadence-group form,—1, 2, 3:

$$\text{i } \underset{b}{\text{vii}}^{\circ} \text{ i} \,|\, \underset{b}{\text{ii}}^{\circ 7} \text{ III}^{+} \text{ V}^7 \,|\, \text{VI} - \underset{b}{\text{ii}}^{\circ 7} \,|\, \text{i} - - \,\|$$

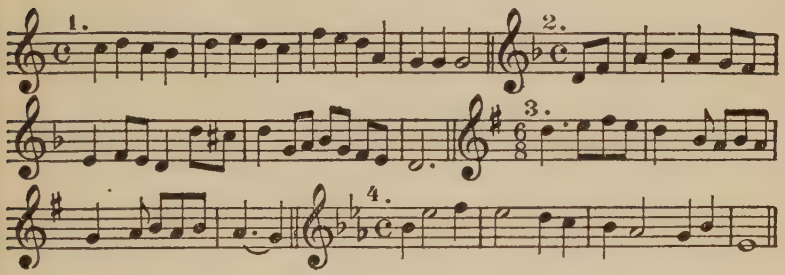
Key of ♭D. Cadence-group form,— 1, 2:

I iv IV ii | iii V⁷ vi ii⁷ | ii⁷ vii°⁷ iii V⁷ | I - - - |

Key of F. Cadence-group form,— 1, 2, 3, 4:

I | ii⁷ - I ii⁷ | I V⁷ iii V⁷ | vi ii I V⁷ | vi IV I ||

3. Harmonize the following melodies, using subordinate-chords wherever they seem available:



4. Compose diatonic melodies in cadence-groups, and harmonize them as above.

LESSON VII.

THE MINOR KEY AND MIXED MODES.

The Minor Key.

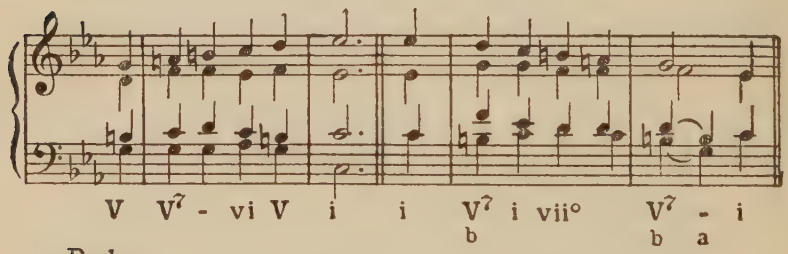
The form of scale which affords the simplest harmonic relationships, and presents at the same time the strongest chords and the most natural melodies is the major scale. That is to say, it is a scale both harmonic and melodic.

The minor scale is used in modern music more often as a color-contrast to the major than in any other way. That is to say, instead of having our minds fixed upon a type of melody as minor, contrasted with major, the real emphasis is upon a type of triad (the tonic and the subdominant) as minor, contrasted with major.

It is, thus, a minor key rather than a minor scale which becomes prominent in thought.

The minor key, however, is not both harmonic and melodic as is the major, i. e., in the form that furnishes the best chord effects there are melodic difficulties, and in the forms that are most melodic the choice of good harmonies is restricted. These difficulties appear in that part of the scale which lies between the fifth and the eighth. Thus, if we attempt to harmonize the ascending melodic minor (observe that this form is usable both in ascending and in descending passages) it will be seen that tonic and dominant harmonics are suitable, while subdominant harmonies seem decidedly out of place.

Good:



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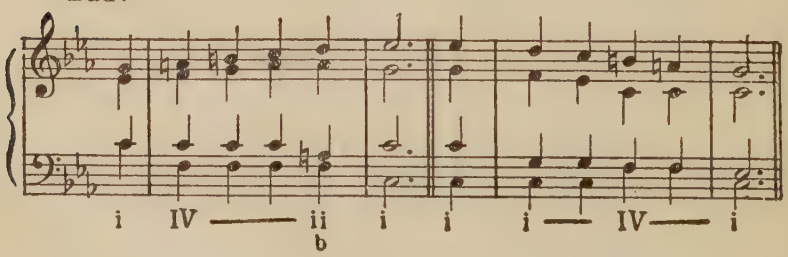
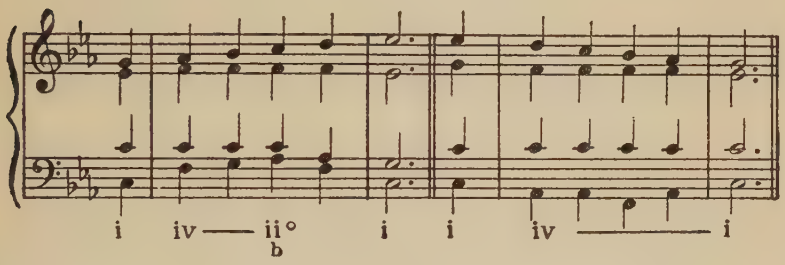


The objection to the subdominant-chord is, of course, that the melodic treatment takes away the minor key impression.

Again, if we attempt to harmonize the descending melodic minor (also usable either up or down) it will be seen that tonic and subdominant harmonies are suitable while dominant harmony is out of place.

Good:



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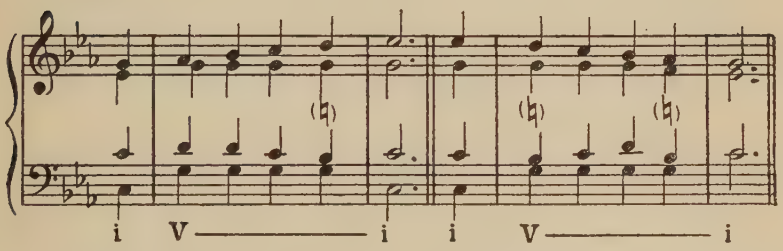
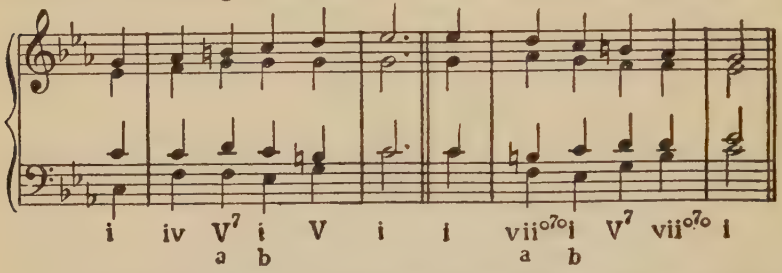
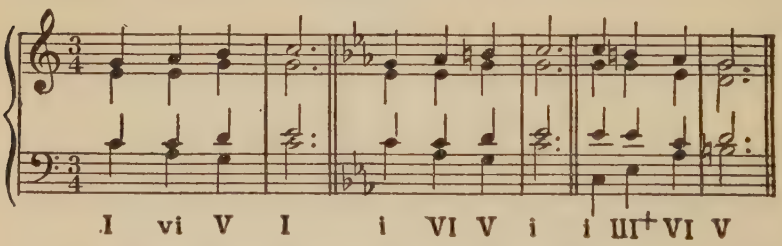


If this latter illustration be played without the use of any ♭b's the characteristic harmonic treatment of the modern keys, namely a dominant triad containing the leading-tone, is absent. If the ♭b's are inserted in the tenor but not in the soprano a singularly unhappy effect of indecision results, the tenor contradicting the soprano, and *vice versa*. A somewhat better effect in the tenor can be gained by replacing the c's in the dominant measures with ♭e's. Yet still the superiority of the harmonization through the subdominant and tonic chords is manifest.

When we harmonize this portion of the harmonic minor scale it is possible to use both subdominant and dominant harmonies in satisfactory ways provided one enjoys the augmented second that lies in the scale-progression between submediant and leading-tone. Indeed as part of a prominent melody there is something attractive in the oddity of this interval:

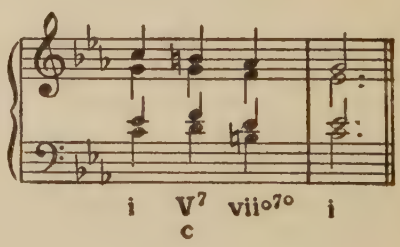


Yet when a few of the usual chord connections of the major key, such as IV V, V vi, iii vi, are transferred to the minor key, this interval of the augmented second seems exceptionally ugly. For example:

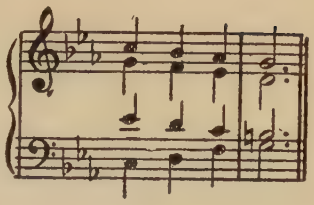


Composers have learned to meet this difficulty in one of three ways.

1. If the augmented second is part of the melody that must be retained, they avoid the use of chords which manifest this ugliness. Thus, compare the last example with the following phrase:

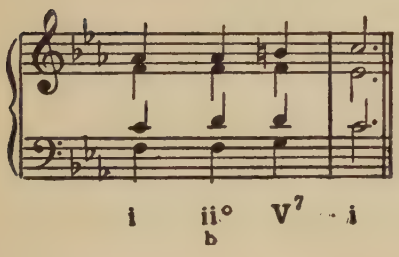


2. If the general contour of melody is required (up or down), but the augmented second is not needed, they utilize a melodic minor passage:

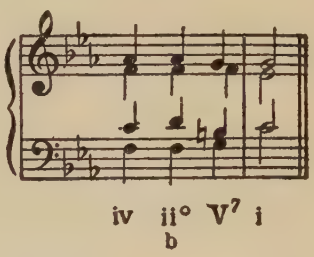


3. If the chords are determined, but the melody is free, the part which would have sung the augmented second is led back in the opposite direction, and the other parts also, so far as this is helpful.

Thus

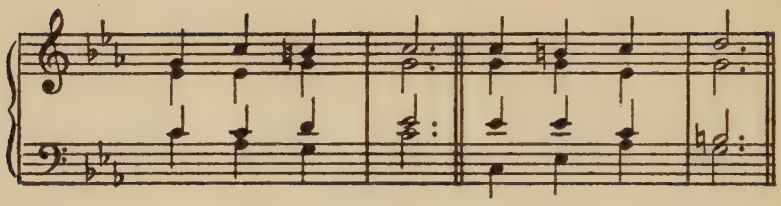


can be corrected to



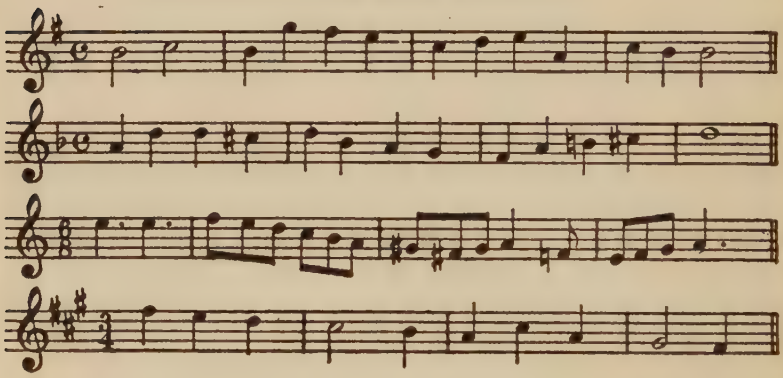
The rule just given is adequate unless the note in question happens to have been doubled. Then the attempt to avoid the augmented second would produce either parallel octaves or an awkward skip in melody by one of the parts. This difficulty has to be prevented by previous care to avoid doubling the note in question. This case most frequently happens in the use of the submediant-chord, *the third of which should be doubled instead of the root* (which is the note causing the trouble).

Thus the ugliness of the illustrations given above (see preceeding page) can be prevented while retaining the chords chosen then, in the following manner:



Exercises in the Use of the Minor Key.

1. Harmonize the following melodies:



2. Compare cadence groups to the following chord-schemes:

Key of c. Accent-group form,— 3, 1, 2:

i | i ii°V | VI - iv | V⁹ III′ V⁷ | i - ||
b b b

Key of e. Accent-group form,— 3, 4, 1, 2:

i iv | i V i VI | v - i III | iv ii° V -⁷ | i - ||
b c

Key of ♭b. Accent-group form,— 5, 6, 1, 2, 3, 4:

i - | i - - V - ^{9} - | V^{7} - - i VI - | VI - - V^{7} - - | i - - - ‖

Key of f. Accent-group form,— 1, 2.

i ii^{o} | V VI | iv V | i - ‖

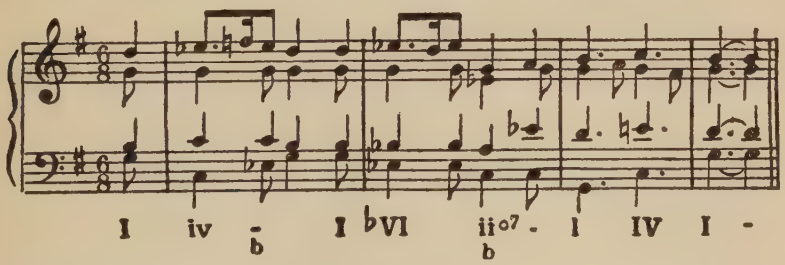
3. Compose diatonic melodies in minor keys and harmonize them as above.

MIXED MODES.

The Major-Minor Key.

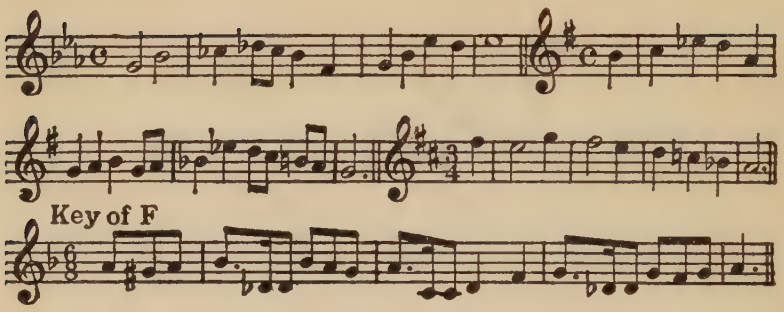
The use of the minor key for the color of its chords has a further application in music written in the major key, for frequently color-substitutes drawn from the minor key are inserted temporarily.

It must be remembered that the dominant triad, the dominant seventh-chord, and the leading-tone triad are identical in both the major and the minor keys on the same tonic note: hence the substitutes referred to affect mainly the submediant, subdominant, and supertonic-chords, and the leading-tone seventh, and dominant ninth-chords:



Exercises in the Use of the Major-Minor Key.

1. Harmonize the following melodies; using wherever suitable minor supertonic, subdominant and submediant-chords:



2. Compose cadence-groups to the following chord-schemes:

Key of ♭A. Accent-group,—form 4, 1, 2, 3:

I | iv$^{\flat 3}$ (c) I V^{7} iii (b) | I - - ♭VI | ii$^{\flat 7 5}$ (b) - V -^{7} | I - - ||

Key of D. Accent-group form,— 2, 3, 1:

I - | ii$^{\flat 7 5}$ V ♭VI | iv$^{\flat 3}$ ii$^{\flat 7 5}$ (b) I | V - ^{7} | I ||

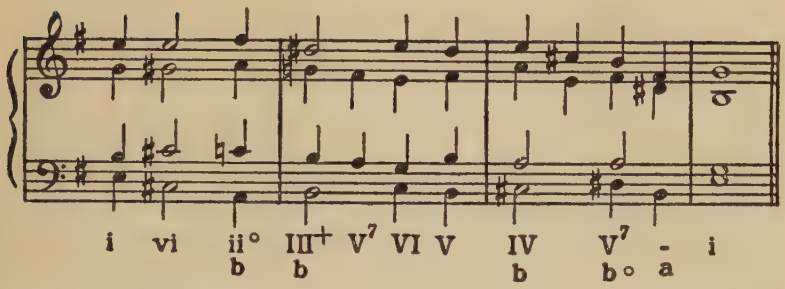
Key of B. Accent-group form,— 1, 2:

I ii (b) | iii ii$^{\flat 7 5}$ | iii (b) V | I - ||

3. Compose melodies in the major-minor key and harmonize them.

The Minor-Major Key.

Much less frequently, and less effectively, composers utilize certain features of the major key in a passage that has a basis a *real minor center*:



So seldom does this occur that it does not seem advisable to set the student any tasks of this nature.

LESSON VIII.

OTHER DIATONIC CHORDS AND CHROMATIC NOTES.

The student has now passed in survey the triads of the major and minor keys and the tendency-chords to the tonic, in their usages that make for tonality; that is, that create the impression of a unity in the music through allegiance to the central — the tonic triad.

The chords of the major key which do not yield so definite an impression of key are the mediant triad and the remaining seventh-chords (namely, $I^{7\prime}$, ii^7, iii^7, $IV^{7\prime}$ and vi^7).

The failure of the *mediant triad* to show definite key allegiance is because, in addition to the natural independence of all consonant triads, the leading-tone of the scale by its place as fifth of the mediant-chord is robbed of its special tendency character; that is, it is made stable instead of sensitive.

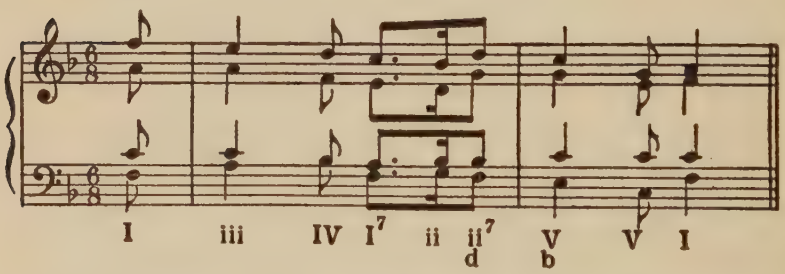
The failure of the *seventh-chords* to show definite key allegiance is because in none of them there is any dissonance except that between root and seventh; hence the tendency of the chord is not so plainly marked as in the dissonant chords

already discussed. It is also the fact that these chords are rather harsh, especially those which contain the major seventh ($I^{7\prime}$ and $IV^{7\prime}$).

Nevertheless, as a means of variety all of the chords are utilized. In general it is found that the most natural progressions out of them are to the consonant triad whose root is at the perfect fourth above (thus retaining a single note-of-union), or to the consonant triad whose root is on the adjoining scale-degree above; for example, iii^7 to vi. or iii^7 to IV; $I^{7\prime}$ to IV, or I^7 to ii. These progressions correspond to those which we have already met in passing from V or V^7 to I or to vi.

With regard to seventh-chords in general the dissonance of root and seventh is found to assert tendency as a disposition to result in a smaller interval (sixth or fifth) reached smoothly, i. e., without skip from either note. The result of this tendency in all the cases so far under consideration has been to make the seventh descend a degree.

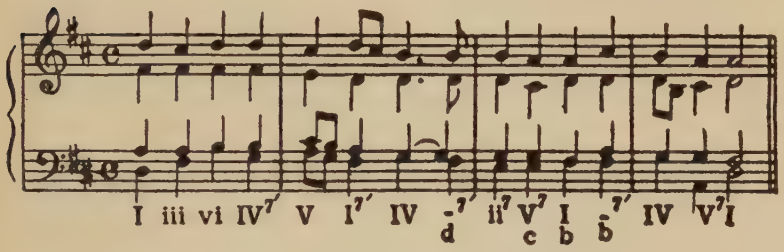
Example 1.—



The harshness of the dissonance in these seventh-chords may be softened if one use the chord only when its seventh can be introduced as the note-of-union from a previous chord, or as a passing-tone (neighboring tone entered without skip). It was formerly the rule in all text-books that secondary sevenths, as they are called, must be brought in in one of these two ways.

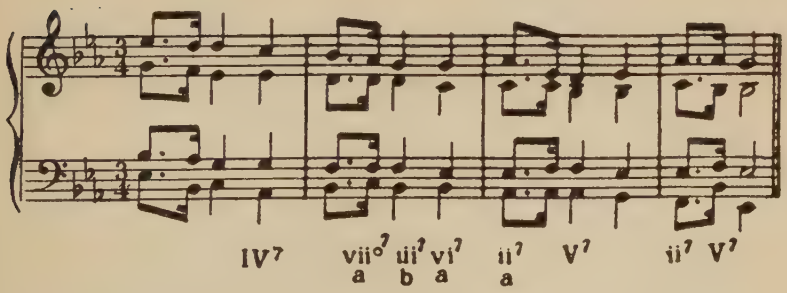
Thus, compare with each other the various seventh-chords in the following example:

Example 2.—



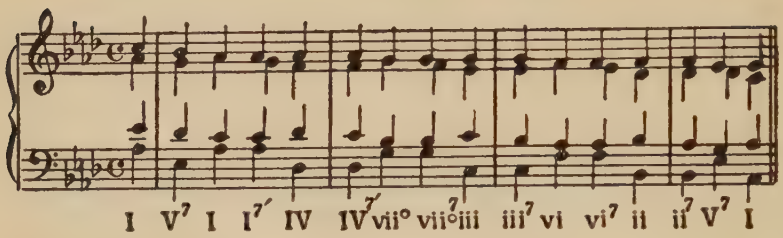
Another favorite method of making these dissonances smoother is to resolve one seventh-chord directly to another; thus, as it were, pushing on the inclination of the dissonant tones from chord to chord until a pleasanter chord is found upon which to make final resolution.

Example 3.—



Notice in treating the last two seventh-chords the cadence feeling calls for fundamental positions of the chords, and so incidentally the dominant-chord is brought in without its fifth, an arrangement already seen to be good.

Example 4.—

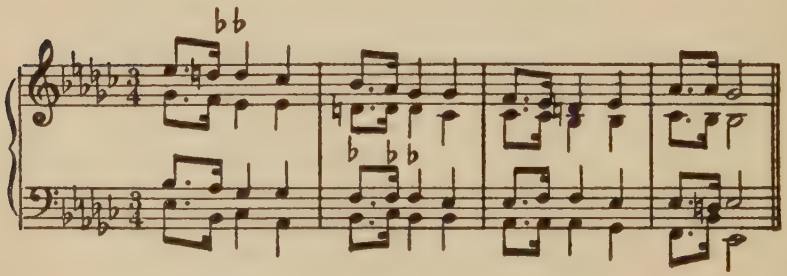


The example just given shows a series of seventh-chords and resolutions which is frequently met, in whole or in part. Notice that by the omission of each resolution triad the passage would become an illustration of the preceding paragraph. The rule might then be formulated that in such a passage each third of a chord remains as seventh of the next chord.

Notice, too, that every other seventh-chord is left without its fifth. This would not happen except when every chord is taken in fundamental position.

Notice, also, that in this regular series the leading-tone seventh-chord is made to resolve to the mediant triad. By itself alone such a resolution is not enjoyable; but through the force of the regular series (called a SEQUENCE, which will come up later for discussion), it is felt to be admissible.

Example 5.—



This is seen to be Example 3, rewritten in the minor key. In it we get a good illustration of the special adaptations which this key affords. Thus the use of the leading-tone becomes here apparent. In chords where the seventh of the scale should ascend it has its proper writing as a leading-tone. In chords where is must descend choice has to be made between an augmented second or the melodic descending form of the scale.

Except for the modifications thus suggested, the use of subordinate chords in the minor scale is the same as in the major scale.

In either, too great dependence on these effects gives a somber, rough, and, often, unlovely character to the music; while the occasional use of them, as a means of variety, is most valuable and desirable.

Exercises in the Use of Subordinate Chords.

1. Compose cadence-groups to the following chord-schemes:

Key of D. Accent-group form,— 4. 1, 2, 3:

$$\mathrm{I} \;\Big|\; \underset{\mathrm{b}}{\mathrm{I}}\ \overset{7'}{-}\ \mathrm{IV}\ \overset{7'}{-} \;\Big|\; \mathrm{V}\ \ \mathrm{iii}^{7}\ \ \mathrm{IV}\ \ \mathrm{ii}^{7} \;\Big|\; \underset{\mathrm{b}}{\mathrm{iii}}\ \ \mathrm{V}^{7}\ \mathrm{V}^{9}\ \overset{7}{-} \;\Big|\; \mathrm{I}\ -\ - \;\Big\|$$

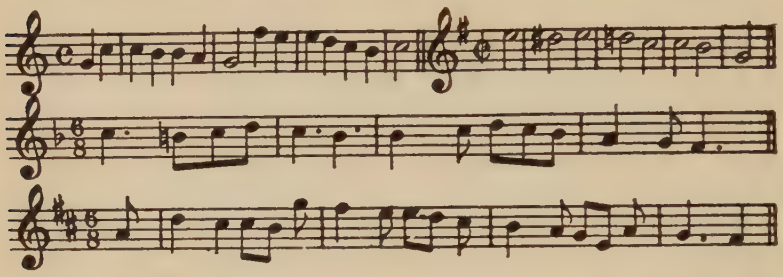
Key of e. Accent-group form,— 1, 2, 3:

$$\mathrm{i}\ \underset{\mathrm{b}}{\mathrm{vii}^{\circ}}\ \underset{\mathrm{b}}{\mathrm{i}} \;\Big|\; \mathrm{III}^{+7'}\ -\mathrm{VI} \;\Big|\; \mathrm{iv}^{7}\ \mathrm{V}\ \overset{7}{-} \;\Big|\; \mathrm{i}\ -\ - \;\Big\|$$

Key of F. Accent-group form,— 3, 1, 2:

$$\mathrm{I}\ \ \mathrm{ii}^{7}\ \mathrm{V}^{7}\mathrm{I}^{7} \;\Big]\; \mathrm{IV}^{7}\ \ \mathrm{vii}^{\circ 7}\ \ \mathrm{iii}^{7} \;\Big|\; \mathrm{vi}^{7}\ \mathrm{ii}^{7}\ \mathrm{V}^{7}\ \ \mathrm{I}\ - \;\Big\|$$

2. Harmonize the following melodies, using subordinate-chords wherever available:



3. Compose melodies in both major and minor keys and harmonize them, using subordinate-chords wherever available.

Chromatic Notes.

Chromatic notes in a key are of three sorts:

First.— Tones of color-chords in the mixed modes (major-minor key, for example), already discussed. Here the note may be wholly consonant, and free to move out even by skip.

Second.— Non-harmonic neighboring tones, occurring always as alteration of the degree next to the note that follows.

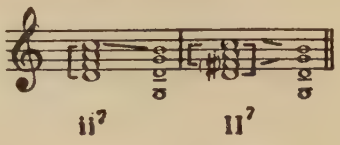
Third.— Color substitutes in tendency-chords.

This last use of chromatic tones furnishes a still more important method of softening the outline of secondary seventh-chords than any of those previously given.

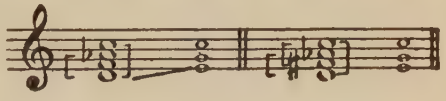
The most striking illustration of this is found in the various chromatic treatments afforded to the supertonic seventh-chords. As it stands unmodified in the major scale, the only dissonance is between root and seventh, and the seventh can move by a half-step progression to the leading-tone of the scale. The two usual resolutions of the chord,

to the dominant or to the mediant triads, both call for this downward movement of the seventh.

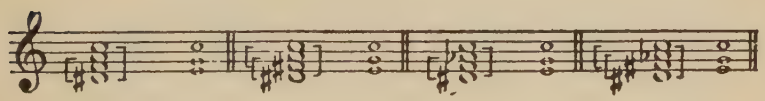
But the tendency of the chord to these same resolutions can be heightened by substituting a raised third in the chord, causing thereby an added dissonance between the third and seventh, such as one has in a dominant-seventh chord:



Again, the fifth of the chord may be lowered. This makes it the same as ii° in a minor key, and capable of being classified as a major-minor effect. But the substitution of the lowered fifth, while it does not hinder the inclination of the chord to find resolution in V or in iii, suggests also a new possibility. Changed in this way it is the root that is doubly dissonant (with fifth and seventh), and so the root is easily moved. If one retains the seventh as note-of-union and lets both the lowered fifth follow its tendency down and the root rise nearer the seventh, the chord is thus treated as a tendency-chord to the tonic — a resolution that proves very acceptable:

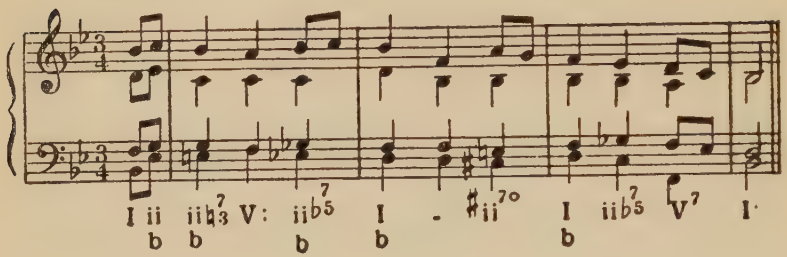


The chord can be made still more urgently to incline to the tonic triad by chromatic raising of the root, or of root and third, or of root and lowered fifth, or of raised root and third and lowered fifth:



It is to be noted that the raising of the root shuts out of the resolutions of the chord that to the dominant triad, for the substitute tone has its tendency upward.

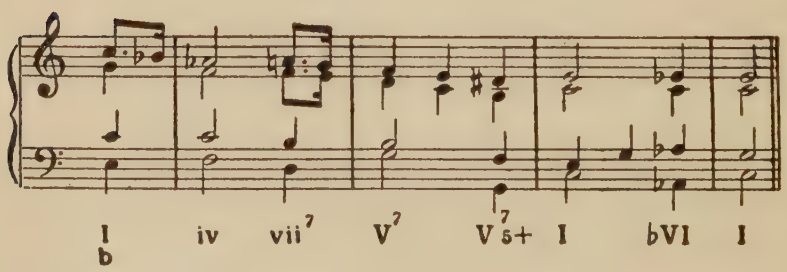
Example 1.—



NOTATION OF CHROMATIC TONES.

The discussion of chromatic tendency will be continued in later lessons, but it is already apparent that in most cases a chromatic tone is written as a raised note if it ascends to the next higher scale tone, and is written as a lowered note if it descends to the next lower scale tone. The exception to this rule occurs when the chromatic tone is consonant and thus free in its movement. In this case its writing is determined by its place in the chord, even if it makes a chromatic progression (half-step movement), upon the same scale degree; that is, although lowered it may ascend, or although raised it may descend.

Example 2.—



Exercises in the Use of Chromatic Notes.

1. Compose cadence-groups to the following chord-schemes:

Key of ♭B. Accent-group form,— 1, 2, 3, 4:

$$\mathrm{I}\ \mathrm{I}\div\ \mathrm{IV}\ \underset{\mathrm{b}}{-}\ \Big|\ \underset{\mathrm{c}}{\mathrm{ii}^{7}}\ \sharp\mathrm{ii}\overset{\flat\overset{7^{\circ}}{5}}{\sharp 3}\ \underset{\mathrm{c\,b}}{\mathrm{I}}\ -\ \Big|\ \underset{\mathrm{b}}{\mathrm{vii}^{\circ}}\ \underset{\mathrm{b}}{\mathrm{I}}\ \mathrm{iv}^{\flat 3}\ \mathrm{V}\ \Big|\ \underset{\mathrm{b}}{\mathrm{iii}}\ \mathrm{V}^{7}\ \mathrm{I}\ -\ \Big\|$$

Key of G. Accent-group form,— 1, 2, 3, 4, 5, 6:

$$\mathrm{I}\ -\ -\ \mathrm{III}\sharp 3\ -\ -\ \Big|\ \mathrm{vi}\ \underset{\mathrm{c}}{\mathrm{ii}}\overset{7}{\sharp 3}\ \underset{\mathrm{c\,a}}{\mathrm{I}}\ \mathrm{V}\sharp 5\ \underset{\mathrm{b\,c}}{\mathrm{I}}\ \mathrm{V}^{7}\ \Big|\ \mathrm{I}\ -\ -\ \flat^{7}\mathrm{iv}^{\flat 3}\ -\ \underset{\flat}{\mathrm{ii}}^{\flat 5}\ \Big|\ \mathrm{V}^{7}\ -\ -\ \mathrm{I}\ -\ -\ \Big\|$$

In the two following schemes add neighboring tones where available:

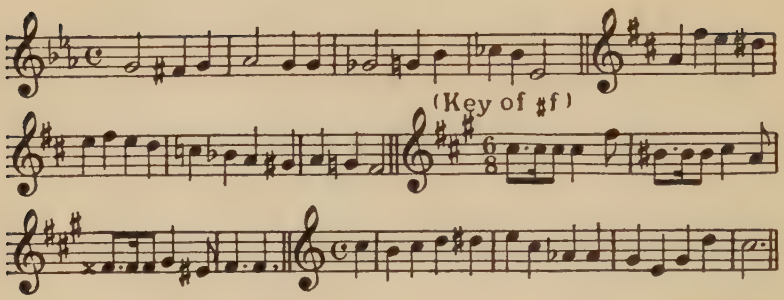
Key of e. Accent-group form,— 3, 1, 2:

$$\mathrm{i}\ \Big|\ \mathrm{V}\ -\ \mathrm{i}\ \Big|\ \mathrm{iv}\ -\ \mathrm{VI}\ \Big|\ \mathrm{V}\ -\ -\ \Big|\ \mathrm{i}\ -\ \Big\|$$

Key of G. Accent-group form,— 4, 1, 2, 3:

$$\mathrm{I}\ \Big|\ \mathrm{I}\ \underset{\mathrm{b}}{-}\ \underset{\mathrm{b}}{\mathrm{ii}}\ \underset{\mathrm{c}}{\mathrm{vii}^{\circ 7}}\ \Big|\ \underset{\mathrm{b}}{\mathrm{I}}\ \underset{\mathrm{c}}{\mathrm{V}}\ \mathrm{I}\ \flat\mathrm{VI}\ \Big|\ \underset{\mathrm{c}}{\mathrm{I}}\ \mathrm{iv}^{\flat 3}\ \underset{\mathrm{b}}{\mathrm{I}}\ \underset{\mathrm{b}}{\mathrm{iii}}\ \Big|\ \mathrm{V}^{7}\ -\ \mathrm{I}\ \Big\|$$

2. Harmonize the following melodies, treating the chromatic notes either as neighboring tones, as major-minor effects, or as parts of the chromatically altered supertonic seventh-chord:



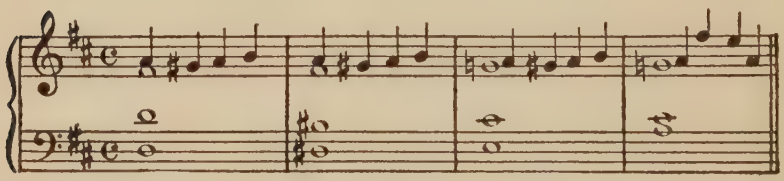
3. Compose melodies in both major and minor keys with chromatic notes that may be harmonized as above. Harmonize them.

LESSON IX.

IMITATION.

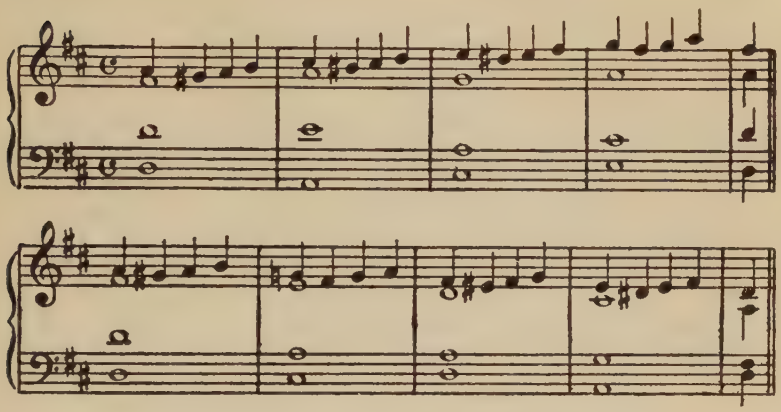
The Melodic Sequence.

It is a very common device of melody to repeat a pattern of a few notes over and over again:

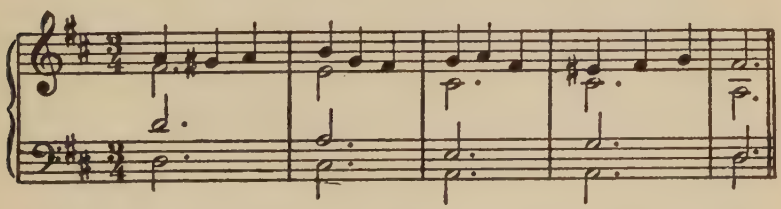


If the pattern be merely reiterated without change it speedily becomes tiresome. Thus the interest in the example just given has just about reached its limit, in spite of the variety of the chords. The student may see this by repeating the first measure in the place of the fourth measure and comparing the result with the fourth measure as written.

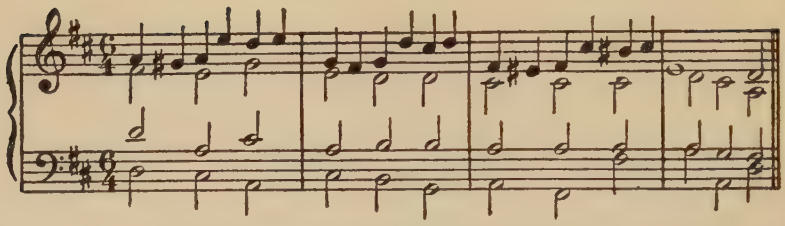
If, instead of repeating the pattern exactly, the same contour of melody be taken in successive repetitions but each time starting upon a higher tone, or each time starting upon a lower tone, the effect is known as a melodic sequence:



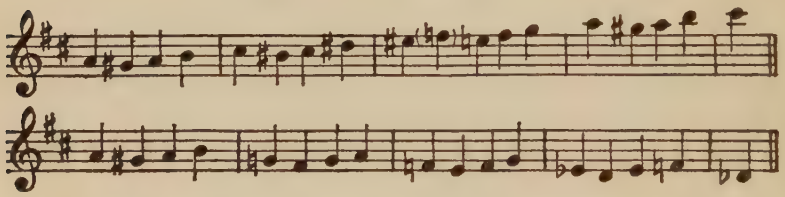
A sequence pattern is always equal to a rhythmic accent-group of some sort, for the very idea of repetition involves the recurrence of the same general values of emphasis. Thus the following melody, although identically the same as that in the last illustration, has quite lost the sequence feeling:



If, by reason of the striking character of the figure that is chosen, one is able to recognize the sequence in spite of an apparent difference in the rhythmic values of the repetitions, the secquence is felt instantly to be a syncopation—the sequence group opposing the regular grouping:



A strict melodic sequence would require that the exact intervals of the melodic pattern be retained in the repetition, and that the first tone of successive repetitions should always stand in the same relation to the last of the previous repetition that the first tone of the first repetition stood to the last tone of the original pattern (called the model):



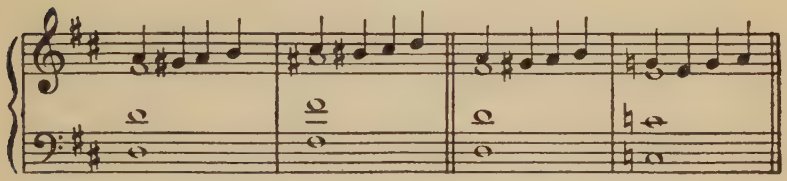
A comparison of the strict sequences just given with the sequences on the same model already harmonized, makes clear the advantage in point of usefulness of that form of imitation which ignores in the main the exactness of major or minor second, but retains the scale degrees as the basis of the repetition. This flexible form of sequence adds to the repetition a certain effect of freedom, and yet permits the series, however much extended, to lie within the same key.

The Harmonic Sequence.

This freer form of sequence attains still more of importance when, as is sometimes the case, the sequence movement is made to include the melodies of all the parts, and thus to create from the sequences the chords themselves; making a HARMONIC SEQUENCE.

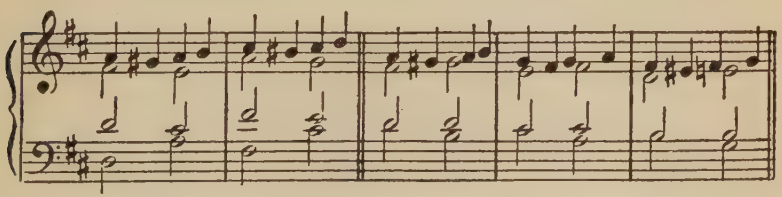
Not every melodic sequence is suitable to be worked out as a harmonic sequence. Thus a melody which is harmonized in but one arrangement of a single chord cannot serve for model of a harmonic sequence; since each repetition would have to bring the new chord in the same arrangement as the old and thus create parallel fifths and octaves.

Bad:

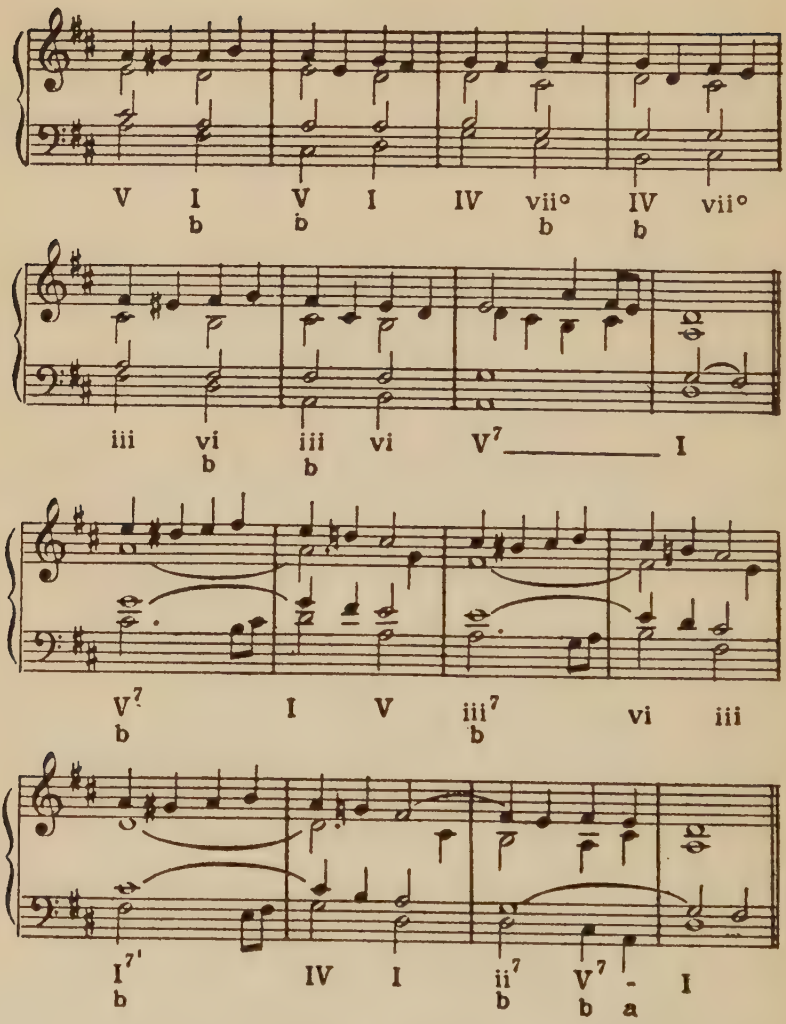


A melody containing at least two positions of a chord, or two or more chords, can serve for model of a harmonic sequence, with the following limitations:

1. The harmonization of the model must be good.
2. The movement from the last chord-arrangement of the model to the first chord-arrangement of the repetition must also be good:



The two attempts with this model just given are neither of them quite satisfactory, for reasons which the student is invited to analyze. The two following examples, however, each fulfill the necessary conditions of a harmonic sequence. They also illustrate another peculiarity of the sequence formation; namely, that, since the device is primarily a melodic device.—

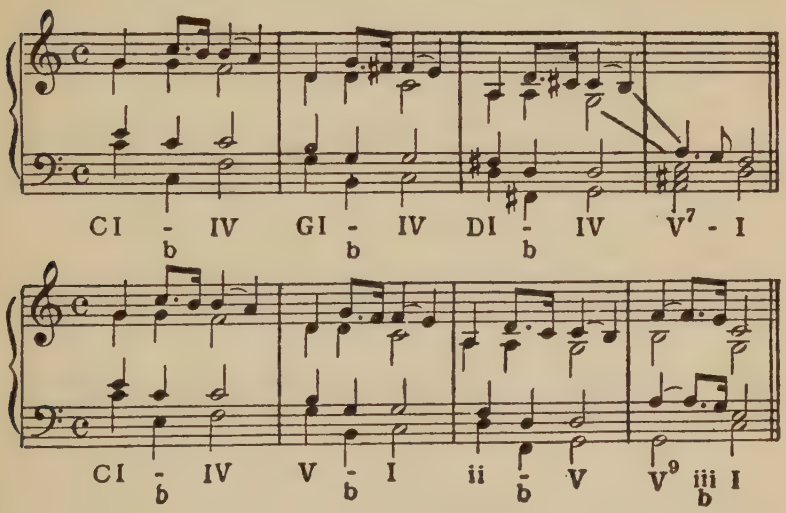


3. After the model has been well harmonized and has reached its first repetition in equally good harmonic progression, *it is henceforth immaterial whether the order of the chords conforms to the usual treatment of key-material, or*

even that the resolutions of tendency-chords be the expected ones; so long as the sequence itself continues. But

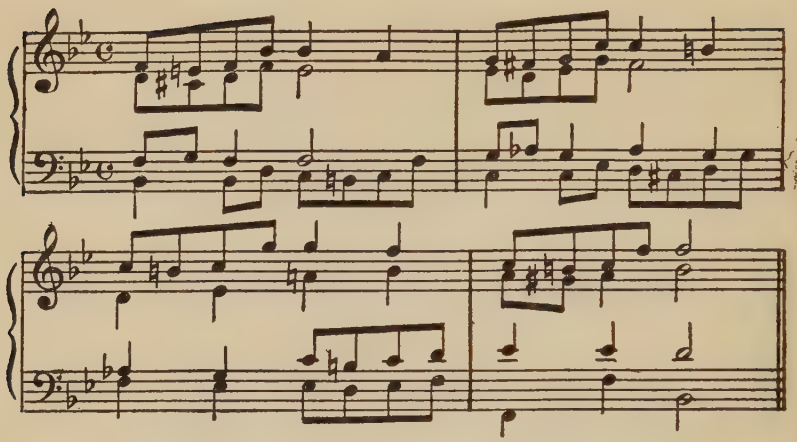
4. The end of the final repetition must once more correctly progress into the chord which follows the sequence.

As has already been suggested in regard to the melodic sequence, the strict harmonic sequence, containing the exact imitations in both melodies and chords, rarely occurs within the limits of a single key; and while harmonic sequences are not infrequently found as a means of modulation (see Lesson XII.), they are more important still as an effect within the key:



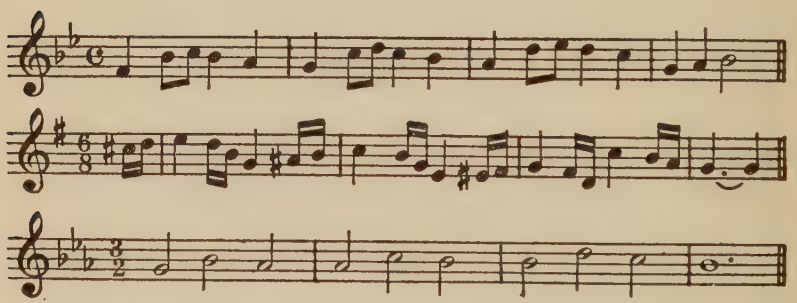
Thus the latter of the two sequences just given is more valuable and in reality more varied than the former.

A combination of the melodic and the harmonic sequence is not infrequently met with, where the imitations are not as exact as to melody or chord progressions as in the cases so far considered, and yet there can be no question that the effect of imitation, sequence fashion, is intended:

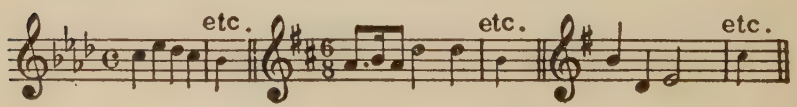


EXERCISES IN SEQUENCES.

1. Harmonize the following melodies in two ways; first, as in a melodic sequence; second, as a harmonic sequence:



2. Harmonize the following sequence models and carry out the sequence through the cadence-groups:



3. Compose as harmoic sequences the following chord-scheme models, completing the cadence-group with a cadence:

Key of F. I IV V — | iv, etc.
Key of D. V^7 — vi | iii^7, etc.

LESSON X.

THE CHROMATIC TENDENCY-CHORDS.

In Lesson VIII. illustration has been given of the effect of chromatic modifications on the supertonic seventh-chord. A similar study could be made of the chromatic modifications of all scale chords. In general it would be seen that the heightening of the effect of dissonance adds perceptibly to the beauty of the chord, and at the same time increases the satisfaction felt in the resolution triad. This puts, in the outcome, an added emphasis upon the resultant triads. Hence the use of chromatic-chords in a key does not endanger necessarily the firmness of the tonality. In fact, if the key triads, to which each chromatic-chord resolves, are themselves used in proper order to show allegiance to the tonic triad, there is even more stability of key.

In estimating the chromatic-chords of a key according to their value in establishing tonality, it is plain that a variation in importance can be shown similar to that of the diatonic triads. Thus, the most important chromatic-chords are those that tend to issue in the tonic triad; next, those that tend to issue in the dominant triad; next, those that tend to issue in the subdominant triad; next, those that tend to issue in their respective subordinate triads.

For the sake of convenience we can classify all these chords as ATTENDANT CHORDS to the triad in which they issue. An attendant-chord, then, is a dissonant tendency-chord to a given consonant triad. Since there are but two varieties of consonant triad, the major and the minor, a display of the

attendant-chords to each of these will make clear the possibilities of the chromatic attendant-chords.

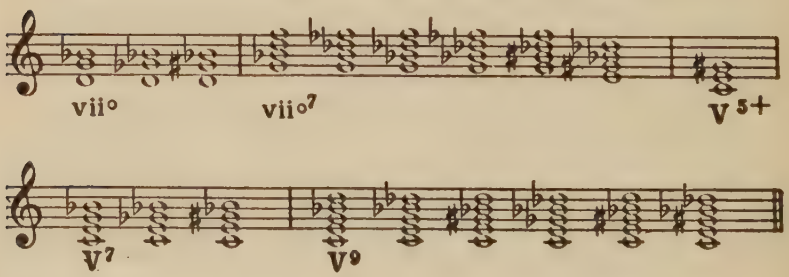
Any attendant-chord owes immediate allegiance to its resolution-chord as if that were tonic in a key; but when it arrives the triad, whatever it be, is accepted at its proper value without question.

Presenting the attendants to a major tonic-chord we find the list to consist of the leading-tone triad and chromatic alterations, the dominant seventh-chord and chromatic alterations of it, the leading-tone seventh-chord and chromatic alterations, the dominant ninth-chord and chromatic alterations, chromatic alterations of the supertonic seventh-chord, chromatic alterations of the subdominant seventh-chord, and chromatic alterations of two triads, the supertonic and the dominant.

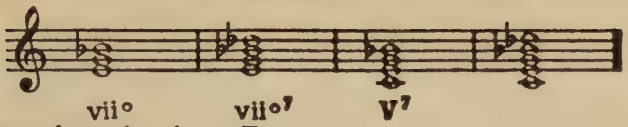
When the student comes to apply these attendants it will be apparent that the more strongly dissonant and strongly chromatic are the chords, the more satisfactory is the issuance into the major triad. This fact makes the number of attendant-chords to a minor triad much less; indeed, the only really acceptable attendants to a minor triad are those which would be diatonic in the key of the triad (vii°, V^7, $vii^{\circ 7}$ and V^9), and also the ♭ii triad and the ♯$iv^{\circ 7}$.

The two lists follow, for the sake of comparison, but there is much yet to be said about the comparative beauty or usefulness of the chords, and about the methods of handling them:

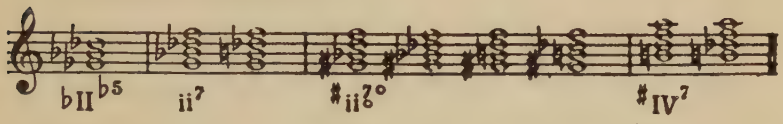
Attendant-chords resolving to the major triad of F:



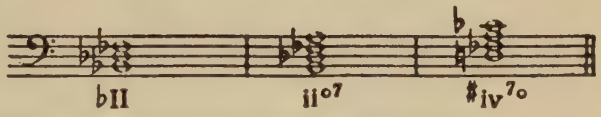
Attendant-chords resolving to the minor triad of f:



Attendant-chords to F:

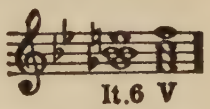


Attendant-chords to f:

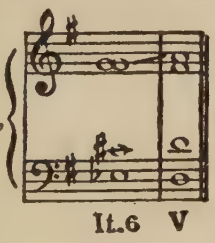
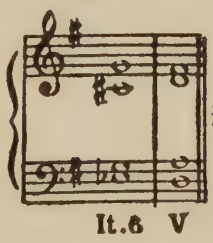


In the development of harmony, composers came to the use of some of these chromatic-chords very early, but in only a restricted way, one by one. Thus a group of chromatic-attendants to the dominant-chord of a minor key became known respectively as the Italian sixth, the French sixth, and the German sixth. Referring to the list as presented above, they would be described as follows:

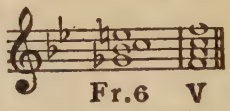
1. The Italian sixth is a first inversion of the leading-tone triad with lowered third ($\text{vii}^{\flat\flat}_{\flat}$), as attendant to a dominant-chord. Hence:



In using the chord the chromatic character of the bass and of the root forbids doubling of any note but the fifth, and some care must be exercised to avoid an unpleasant parallel fifth in resolution. The rule in regard to this is, never so write the chord that both fifths of the chord lie above the root.

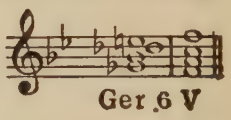
That is,  is poor, but  is good.

2. The French sixth is a second inversion of the dominant seventh-chord with lowered fifth ($V^{7\flat^5}_{c}$) as attendant to the dominant-chord. Hence:



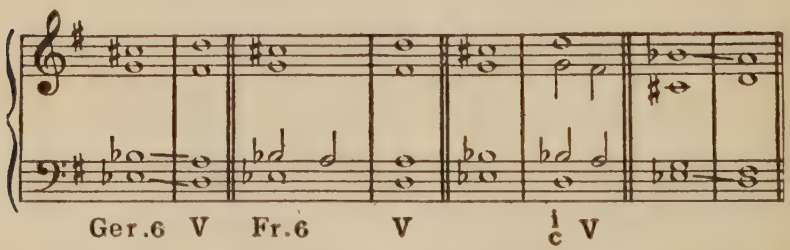
No difficulties arise in the use of the chord, except that all the notes are required, and thus in four-part writing no note is doubled.

3. The German sixth is a first inversion of the leading-tone seventh-chord with lowered third and seventh ($vii^{7\circ\flat^3}_{b}$) as attendant to a dominant-chord. Hence:



The difficulty in the use of this chord consists in the inevitable parallel fifths in resolution, due to the fact that the third of the chord is in the bass, and that both it and the seventh have a downward tendency. The text-books on harmony have customarily offered two subterfuges as a way out of the difficulty. One is by partial resolution to the French sixth before seeking the real resolution. This interchange of tendency-chords to the same triad is already familiar to the student (Lesson V).

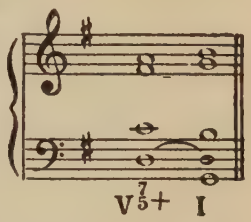
The other is by inserting a substitute chord ($\underset{c}{i}$) before the dominant resolution:



Modern theorists, following, as always, in the wake of composers, agree that the subterfuge is unnecessary; the resolution is good in spite of the parallel fifths, unless, perchance, they seem too obvious in outer parts.

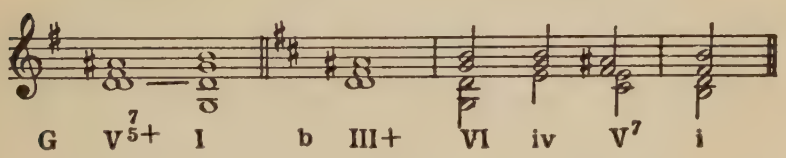
In regard to all these chords, composers now exercise much freedom; not only using them in other inversions or in fundamental positions, but regarding them as attendants to other major-chords than the dominant. Their main function is to lead strongly into the resolution-chord. Their richness of dissonance, and smoothness of issuance into the resultant triad, give them value.

Another attendant that has had much use in Nineteenth Century writing is the dominant seventh with raised fifth (V^{7}_{5+}) as attendant to the major tonic-chord. This is used mainly in fundamental position with the chromatic fifth in the soprano:



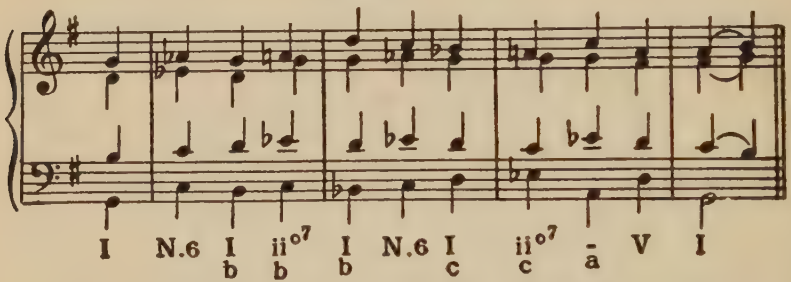
One finds this more often in instrumental music, where the resolution can have the complete chord in five parts.

To be classed with this in some respects is the dominant triad with raised fifth (V^{5+}), attendant to the tonic. It is to be noted that this chord *(the augmented triad),* is found in the minor key as a scale-chord, and there is would have exactly the same resodution; namely, from III^{+} to VI. Observe, therefore, that this double significance of the pair of chords will be of use when the subject of modulation comes up (Lesson XII):



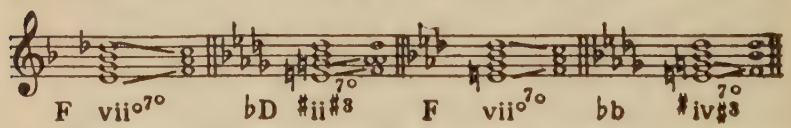
Another interesting chord historically is that known as the Neapoliton sixth. This is the major triad on the lowered second of the scale, in first inversion (^{b}II) as attendant to the tonic-chord. This has been regarded as a chromatic-chord in the minor key, but in fact permits resolution to the major almost as readily. The difficulty met with in this chord is

the same as in the German sixth; namely, the parallel fifths. In this case, however, it is not at all necessary to have them in the minor resolution; nor in the major if one avoids doubling the root of the chord. Theoretically, in fact, one ought never to double the root, since as a chromatic tone it is a tendency tone. But the chord in fact is consonant and only acquires its unstable quality because it is manifestly out of the key in which it is used:



This chord, like the preceding, has value in modulation.

Of still more interest is the chord known as the diminished seventh-chord. It stands in the lists given above as a leading-tone seventh-chord with lowered seventh to a major triad (vii°7°), as a raised supertonic seventh-chord with raised third to a major triad (♯ii$\overset{7°}{\sharp^{3}}$), as a regular leading-tone seventh to a minor triad (vii°7°), and as a raised subdominant seventh-chord (♯iv$\overset{7°}{\sharp^{3}}$) with a raised third, to a minor triad:

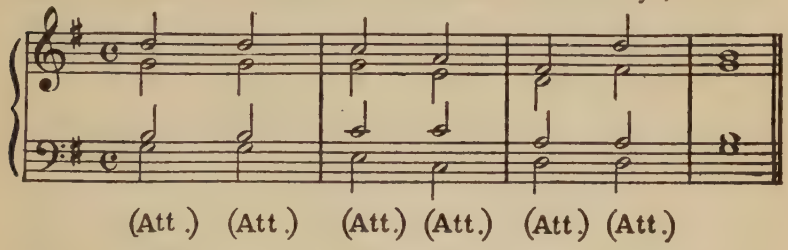


It is readily seen, also, that this chord affords special opportunity for modulation.

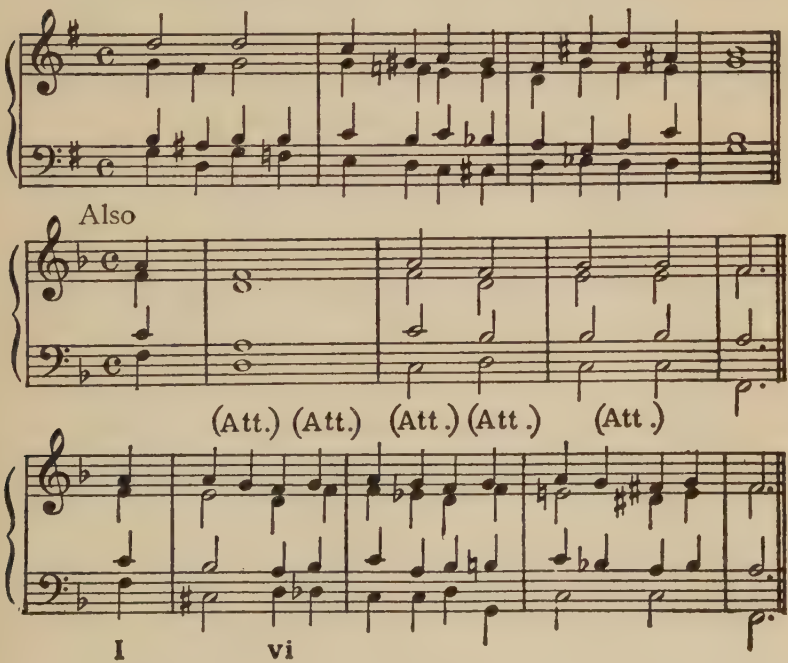
Many of the chords which have been listed above have only recently come to be used at all frequently. They vary greatly in beauty; and in fact they all depend for their beauty upon the skill with which the choice of the individual tones

is made. They are color-chords par excellence. Further discussion of them must be deferred until later.

Within the limits of a given key these chromatic attendants can give great variety and richness, without, as has been said, upsetting the key-balance. The simplest way to make this clear to the sketch an outline of chord keys, such as:

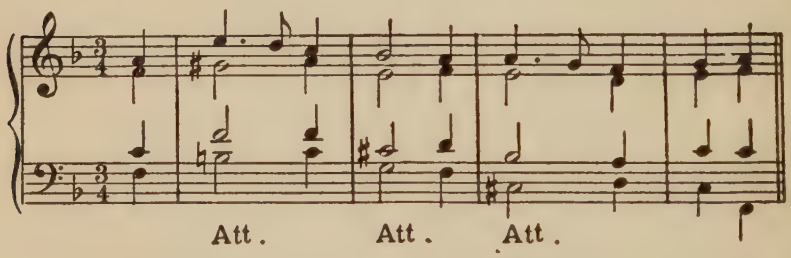


Then fill in this outline with attendants, and compare the stability of the results:



Sometimes the filling in of such an outline causes no difficulty of part movement; but sometimes, also, in order to get a good arrangement of the attendant-chord chosen, a different position of the resolution-chord is required, as in the example just given, where the I and vi could not both have been in the same position, were it not for the intervening attendant.

Finally, notice in regard to attendance (tendency-chords) that much freedom in approaching a tendency note is permissible. This fact is to be compared with the use of neighboring tones, which it will be remembered may be reached by skip, but left only for the tone to which they lead:



EXERCISES IN THE USE OF ATTENDANT-CHORDS.

1. Compose cadence-groups to the following chord schemes, choosing that attendant-chord to each triad which seems most attractive, musically. Notice that the sign Att. means a chord *attendant to the chord which follows:*

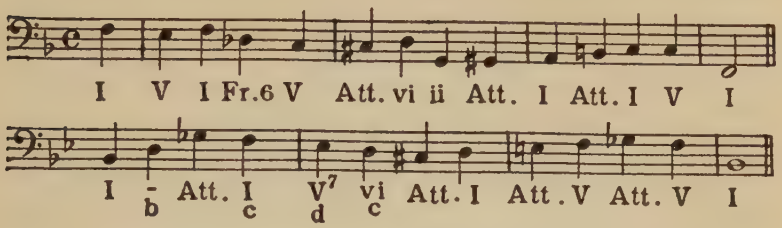
Key of F. Accent-group form,— 1, 2, 3, 4:

I Att. IV Att. | ii Att. V Att. | vi Att. V Att. | V - I^7 - ‖

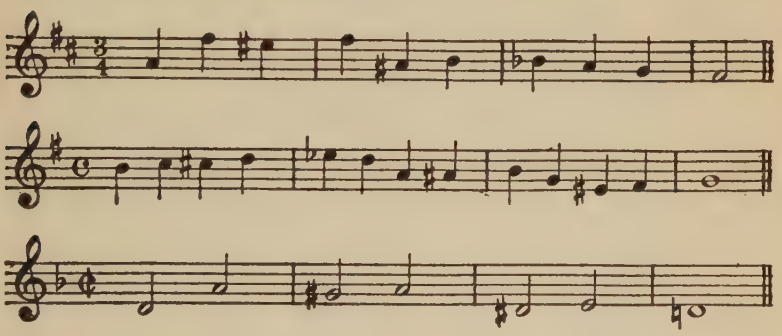
Key of C. Accent-group form,— 3, 1, 2:

I | Att. - ii | Att. iii Att. | I Att. V | I - ‖

2. Harmonize the following melodies in the soprano, treating each chromatic note as a part of an attendant-chord:



3. Harmonize the following melodies in the bass according to the indications given:



LESSON XI.

CADENCES.

The student has been making his exercises up to this time within the limits of a cadence-group. Most of the examples given here have produced the sensation of coming to an actual conclusion, as if all that needed to be said had been said.

This sense of conclusion was due, first, to the rhythmic satisfaction due to the completion of the final accent-group

in the cadence-group; second, to the tonal unity caused by the final issue in the tonic triad, after keeping it in view as a center throughout the piece; and, lastly, to the rhythmic place and arrangement of the two final chords, known as the CADENCE.

Three things are requisite in a cadence:

1. That the final chord be a strong chord, made emphatic by coming upon the grammatical accent of the measure. Heretofore in these exercises it has always been the tonic-chord. Some cadences use other final chords; but, with few exceptions, the final cadence chord is a consonant triad in fundamental position.

2. That this chord be preceded by a different chord which moves naturally into the final one. Consonant triads in fundamental position, or first inversion, and tendency-chords in available arrangements (that is, such arrangements as can resolve well to the fundamental position of the final chord), are good.

3. That the chords stand at the end of a cadence-group. That is, the same progressions which make the cadence occur constantly at other places in the music, but without causing the cadence feeling.

Certain forms of the cadence have become so stereotyped that they are given special names. These names and definitions are displayed below:

The PERFECT AUTHENTIC CADENCE consists of

$$\underset{a}{V}\ \underset{a}{I^8} \text{ or of } \underset{a}{V^7}\ \underset{a}{I^8}.$$

[NOTE.— The figure 8 indicates that the top (soprano) note is the octave of the root of the chord.]

The PERFECT PLAGAL CADENCE consists of $\underset{a}{IV}\ \underset{a}{I^8}$.

The IMPERFECT AUTHENTIC, or PLAGAL CADENCE, has the same chords as the perfect, but I does not require the octave of the root in the soprano, and V or IV may be in first inversion.

The DOMINANT CADENCE (often called the HALF CADENCE), consists of a suitable preliminary chord followed by V on the measure accent.

The SUBDOMINANT CADENCE consists of a suitable preliminary chord followed by IV on the measure accent.

The SUBMEDIANT CADENCE (often called the INTERRUPTED, FALSE or DECEPTIVE CADENCE), consists of V followed by vi.

This list is by no means complete, but includes the more important and standard cadence progressions.

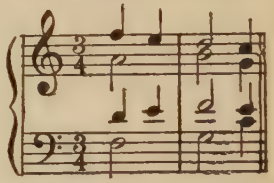
The cadence is to music what punctuation is to speech. The strongest cadences; namely, the authentic and plagal, correspond to a full stop. The other cadences, of varying strength, correspond to other less final rhetorical pauses. Since the purpose of the cadence is to produce a sense of completion of the cadence-group, it would seem that the final chord could never be an inversion or at an unaccented part of the measure. This, in general, is true. Yet modern music is coming to use dissonant tendency-chords so freely that a quite notable form of cadence is the DOMINANT SEVENTH CADENCE (i. e., cadence ending on the V^7), which of course implies a continuation of the music in the following cadence-group.

The different cadence-groups of a single period (see Elementary Theory, Lesson X.), are usually balanced by weak and strong cadences in alternation.

The strength of a cadence is due partly to the chords and their arrangements, and partly to the rhythmic place of

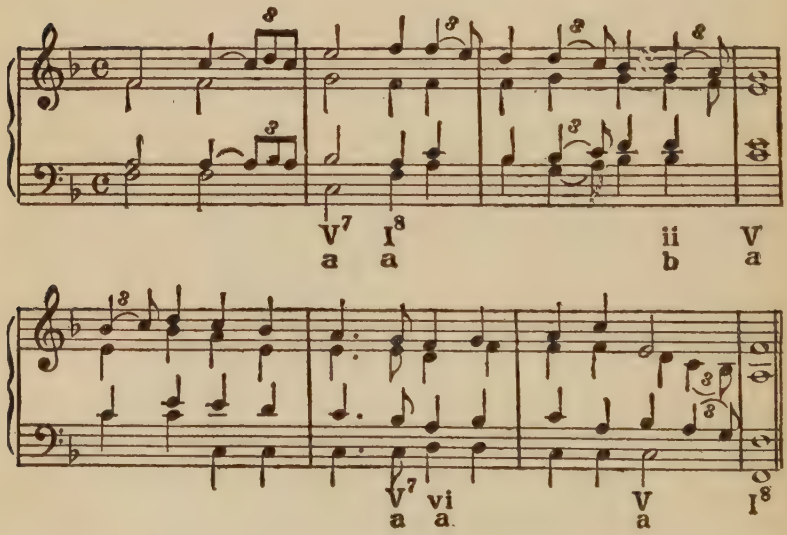
the chords. Thus it happens sometimes that a cadence with strong rhythm but weak chords may outweigh in importance a cadence of weak rhythm but strong chords.

There is, however, a special treatment of cadence-rhythm that is known as the FEMININE CADENCE, where the important accent of the cadence lies with the chord next to the last, instead of with the final chord. This is a seeming exception of the group-form. In general, if chords come in the music after the last accent of the cadence-group, they are felt to be mere addenda to the cadence or as introduction to the following cadence-group. Thus



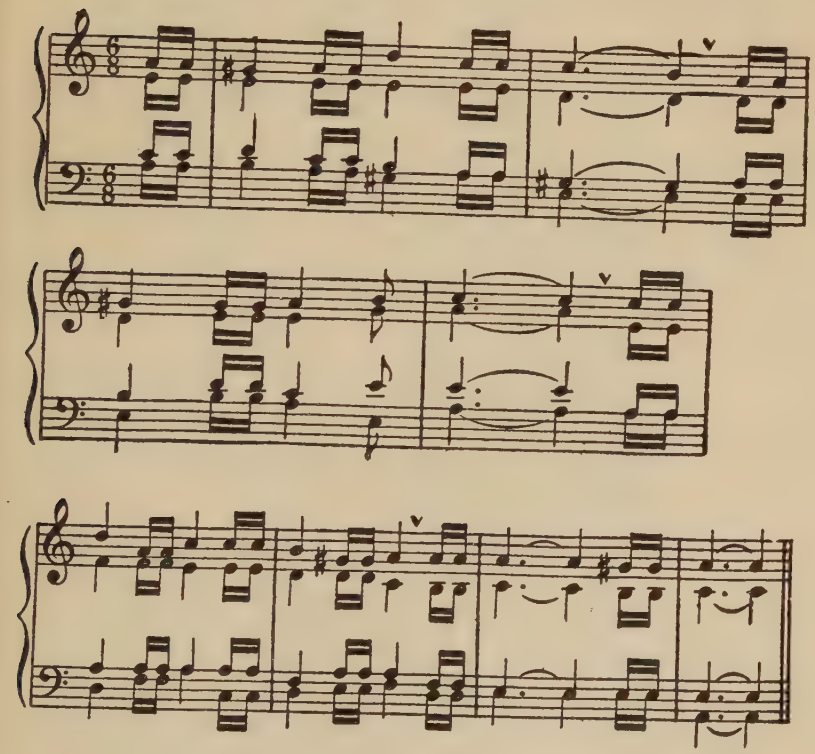
is a feminine cadence.

Example 1.— Cadence-group form,—1, 2, 3, 4:



The first cadence, though strong in chord structure, is of weak rhythm; the second is strong in rhythm but not final in chord; the third is the weakest both in chords and rhythm; the last is strong every way.

Example 2.—Accent-group form,—6, 1, 2, 3, 4, 5:



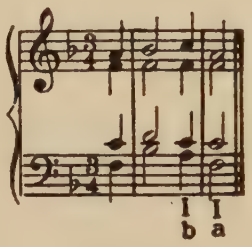
Notice that the last two cadences have the same melody.

Since from this moment the student will be expected to write exercises in period form (see Elementary Theory, Lesson X.), he is advised to read again carefully Lesson IV. of

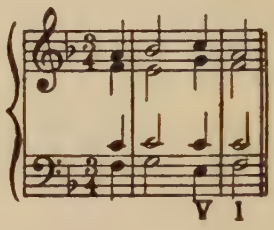
this series of Harmony Lessons, and observe the following additional hints on harmonization of melodies:

1. Do not repeat a chord from an unaccented to an accented beat, unless it is the beginning of a cadence-group, or had already been repeated from a previous accent, or is strikingly rearranged.

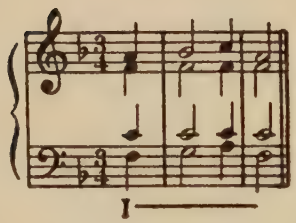
Thus, for example,



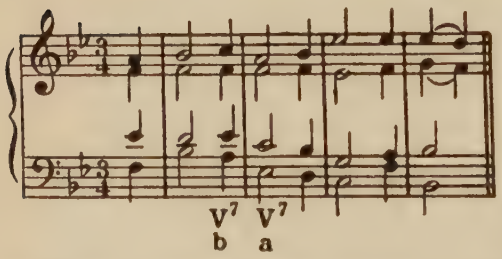
is not as good as



or as



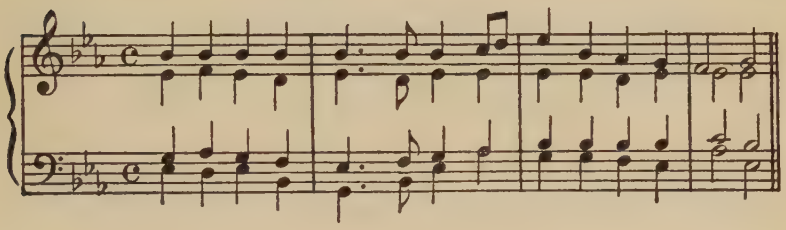
which illustrates the first and second exceptions, or as



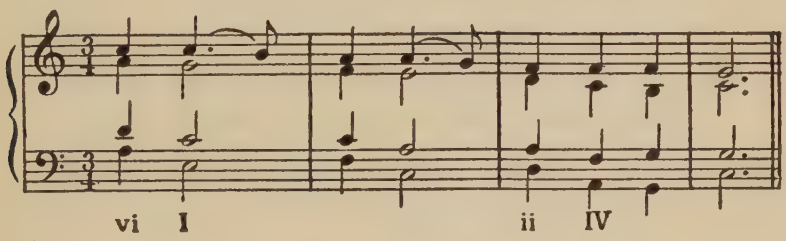
which illustrates the last exception. Notice that in this last example the same melody is used as in the others, but a new key is taken in order to permit a sufficiently striking new position of the chord. Also, at the end of the example, observe that the IV$_c$ substitute chord gives the effect of a feminine cadence.

2. Do not assume that a melody note, when repeated, calls for the same chord or the same arrangement of the chord; not that repetition is always bad, but it often is. In the preceding illustration, for instance, the three high ♭e's have with good effect a different chord for each.

Compare, for example, the following harmonization of repeated ♭b's, with the effect that could be made by actually repeating the entire first chord seven or even four times:



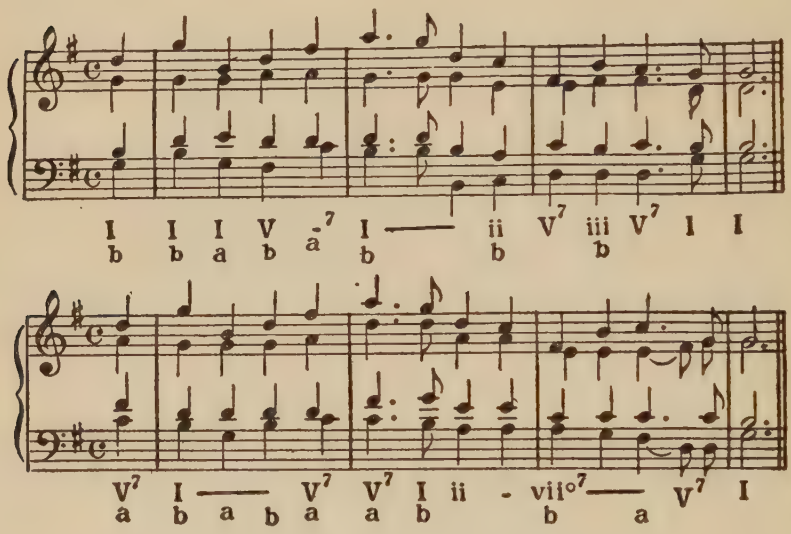
3. Do not follow a subordinate chord with its principal unless there be a movement into a strikingly fresh arrangement of the principal-chord:



4. When wide skips occur, if it is not agreeable to harmonize both notes with the same chord, or use the second as neighboring tone to the same chord, endeavor in passing from one chord to the other to make smooth progressions in

at least some of the other parts, and thus offset the skip of melody in the given part.

Compare the two following harmonizations of the same melody, either of which is good:

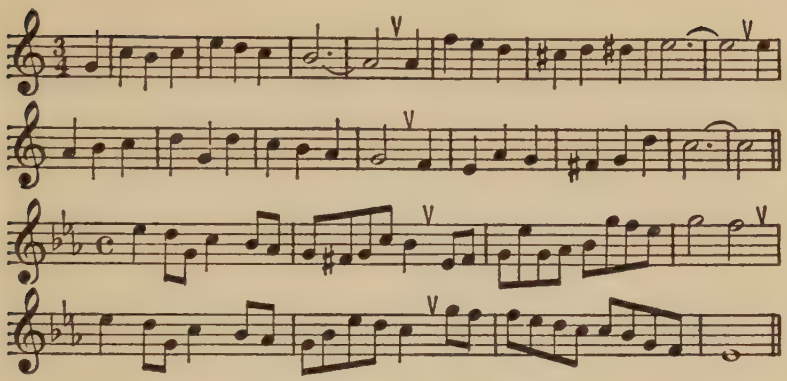


Notice that the highest a″ is a non-harmonic tone in the first harmonization and a chord note in the second.

Notice that the b′ of the next to the last measure is a chord note in the first harmonization, and a non-harmonic tone in the second.

Exercises in the Use of Cadences.

1. Harmonize the following melodies, choosing suitable cadences:



2. Compose periods with the following chord schemes. Use the chords with sevenths or without, in fundamental position or in inversion, at will, except where indicated:

Key of ♭A. Accent-group form,—4, 1, 2, 3:

I | I V vi Att. | vi Att. IV^{V} Att. | I Att. V V^{7} | I - - ^{V}Att. ‖

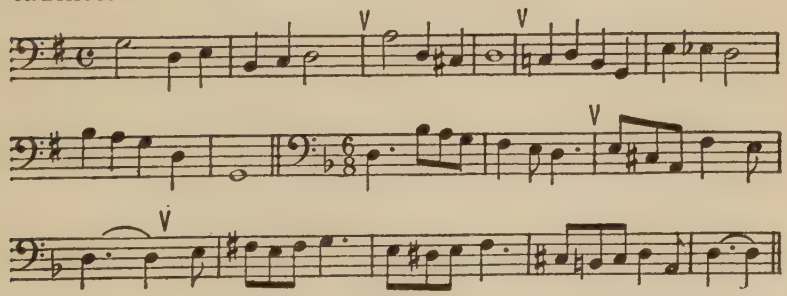
ii Att. iii Att | vi Att. V^{V} V^{9} | iii V - - | I - - ‖

Key of f. Accent-group form,—1, 2, 3, 4, 5, 6:

i - - V - - | V - - i - - | Att. - - III + - - | VI - iv V - - | ^{V}

V - - VI - - | Att. - - iv - - ^{V} | V - - - - - | i - - - - - ‖

3. Harmonize the following basses, choosing suitable cadences:



LESSON XII.

MODULATION.

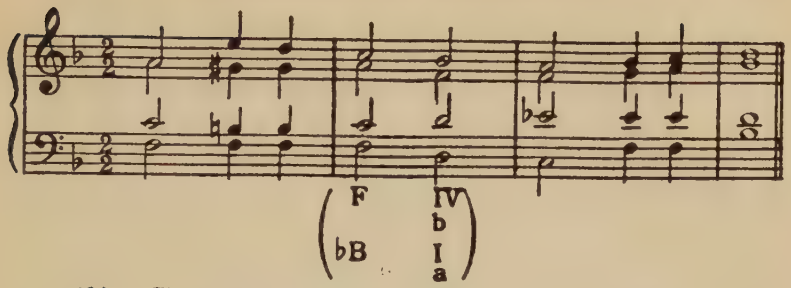
The entire material of a given key, major, minor and chromatic, is known as the TONAL CHROMATIC. That is, the tonal chromatic consists of the twelve tones of our European musical system brought into unity by allegiance to a common center — the tonic triad, major or minor. How this is brought about it has been the object of the lessons up to this point to show. It should also be plain that any one of these twelve tones may be taken as a tonic note upon which the major- or minor-chord might serve as a center. A review of the structure of chords makes it plain that most chords can be made readily to own allegiance to a number of different tonic centers. An illustration has already been given (page 229) of how, with as simple material as that of the principal triads alone, one may pass from one tonic center to another with no break whatever in the continuity of the music. When one has mastered all the wealth of the tonal chromatic this process is excessively easy, especially between keys that contain much common diatonic material.

The process is that known as MODULATION. It consists, briefly, of utilizing the double significance that can be given to some chord common to the two keys. This chord which serves as a *chord-of-union* to the two keys, sometimes called the *bridge-chord,* or *hinge-chord,* is reached in the order of chords proper to the old key, and left in the order proper to the new. There is, thus, actually no new process to master in writing modulations, save that connected with the choice of the suitable key to be entered and of the suitable hinge-chord common to the two keys.

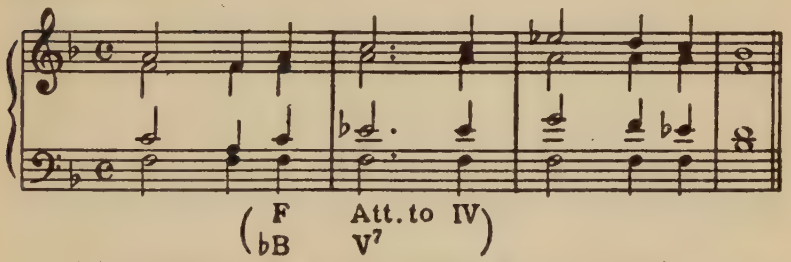
As to the suitable keys for modulation more will be said later on.

As to the hinge-chord; we find it

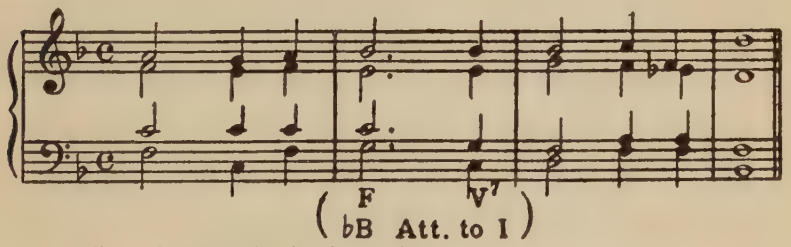
(*a*) Diatonic in both keys:



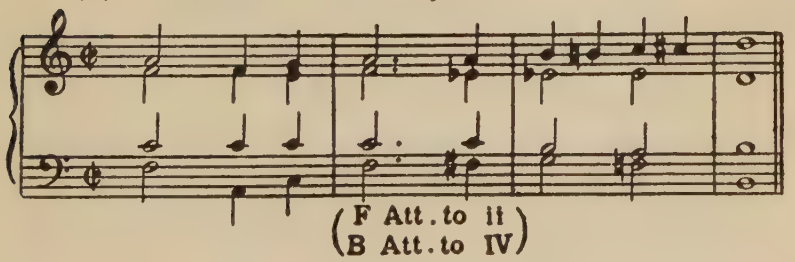
(*b*) Chromatic in the first key, but diatonic in the second:



(*c*) Diatonic in the first key, but chromatic in the second:



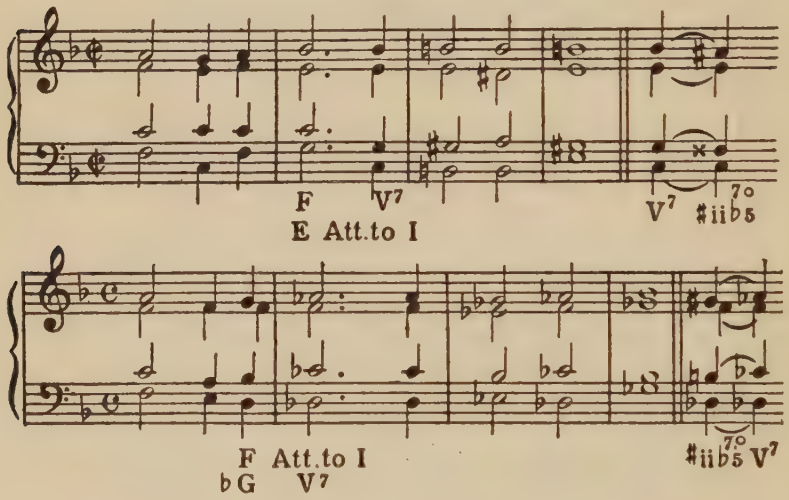
(*d*) Chromatic in both keys:



In this illustration the attendant-chord is entered as if it were attendant to the chord of g (ii) in the old key, but left as attendant to the chord of ♭E (IV) in the new.

A special character is given to that form of modulation in which the hinge-chord actually would require a different notation to express its two meanings. This occurs when the chord as entered has one tone as its root but in the new signification changes to another tone as its root. The cases of this sort could be classified as above, but a more valuable grouping puts them in a class by itself, that of

(*e*) Enharmonic modulation:



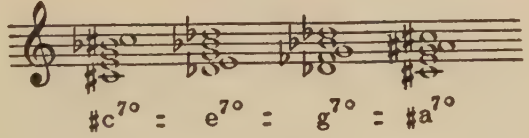
It is usually quite unnecessary to write out the two notations of the enharmonic-chord. More frequently than not composers choose the notation which makes clear to the eye the direction of progress (i. e., they choose the second meaning given the chord); but sometimes, as in the first of the two illustrations just given, they take the simpler writing though it be the first meaning of the chord.

Enharmonic modulations often present the most surprising and engaging of transformations, and are done in a

twinkling, whereas modulations to more closely related tonal centers—to keys having much common material—frequently demand considerable time and require confirmation through continued use of the new center in order to bring a complete adjustment of feeling to it. Thus the illustrations given under *a, b* and *c* could all be accepted as a mere use of attendants to the subdominant-chord, the music continuing in the old key; and even the illustration under *d,* although resolving the attendant hinge-chord to the chord of ♭E, not in the original key, still holds the new tonal center but lightly and would permit return on the slightest indication. On the contrary the enharmonic modulations, under *e,* have plunged us at once into a completely new set of chord groupings and have broken off completely all allegiance to the old center.

The most important of the enharmonic-chords are the diminished seventh-chord, the dominant seventh-chord, the French sixth (a variant of the preceding), and the augmented triad. If the student understands these he will have no difficulty in mastering any others that may appear.

The DIMINISHED SEVENTH-CHORD, in its construction, divides the octave into minor thirds; for the inversion of the interval of the diminished seventh, namely, the augmented second, is the enharmonic equivalent to a minor third.

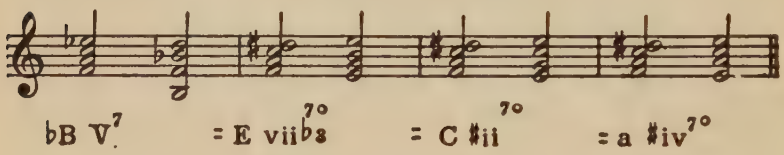
Thus 

Since each of the diminished seventh-chords can appear as leading-tone seventh-chord in major, leading-tone seventh-chord in minor, raised supertonic seventh-chord in major, and raised subdominant seventh-chord in minor, it is manifest that the same combination of sounds (tones) is capable of sixteen different interpretations. To offset this bewilder-

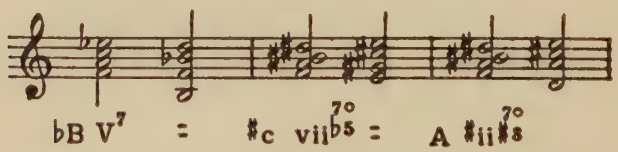
ing wealth of treatments there are actually but three different diminished seventh-chords in music.

The DOMINANT SEVENTH-CHORD also enters the list of enharmonic chords; not, as was the case with the diminished seventh-chord, enharmonic with other dominant seventh-chords, but enharmonic with other chords, as follows:

If the seventh of a dominant seventh-chord be taken as the root of another chord having the same tones, this latter proves to be a diminished seventh with lowered third, which may be treated as in any of the four key relationships in which the diminished seventh-chord stands:

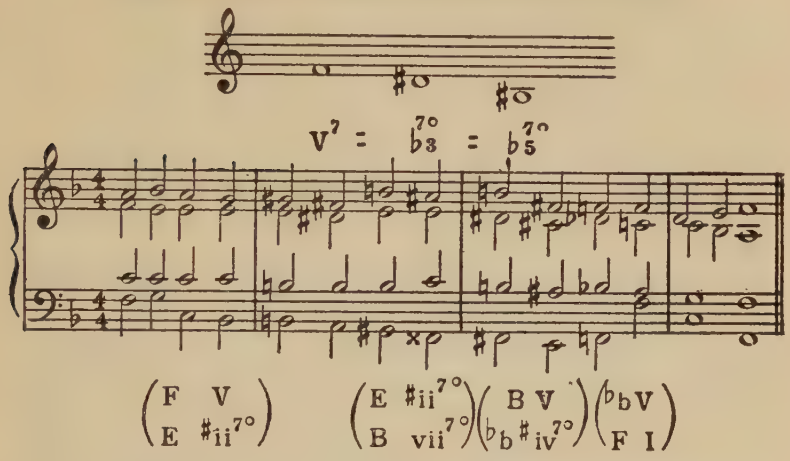


Again, if the fifth of the dominant seventh-chord be taken as the root of a chord with the same tones, this latter proves to be a diminished seventh-chord with lowered fifth, which may stand as leading-tone seventh-chord to a minor-triad, or as raised supertonic seventh-chord to a major triad, only:

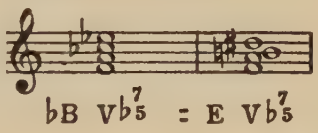


It is, of course, equally true that either of the two chords just presented are enharmonic to each other, as well as to the dominant seventh; so that the relationship of the three chords could have been stated starting from any one of the three.

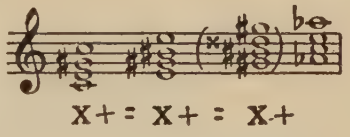
ROOTS OF THE THREE ENHARMONIC-CHORDS.



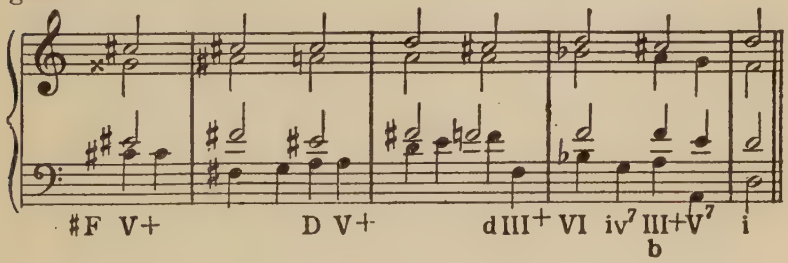
THE FRENCH SIXTH is enharmonic to itself. The lowered fifth of one chord becomes the root of the other, thus



The AUGMENTED TRIAD is enharmonic in the same way as the diminished seventh, since it divides the octave into even intervals of a major third:



The proper note to be doubled is the root, and the enharmonic treatment of the chord in fact would consist of enforcing one or another of the tones, by doubling, so as to give to it the effect of root:



Considerable space has been given to the subject of enharmonic modulation, but the student should not be led to infer therefrom that such modulation is the most frequent or the most important method of transferring the tonic center. He should make sure of his mastery of all other means before he plunges into this fascinating method.

More important, even, than the means of modulation is the method of establishing it.

In general, a modulation is not regarded as complete until a cadence has been made in the new key. Often, too, pains must be taken to introduce and emphasize material that would not seem natural in the old key. This is especially the case when most of the chords are common to both keys. For this reason it is usually wise to reach the hinge-chord as soon as possible after the beginning of the cadence-group in which the modulation is desired, so that time may be left to arrive at and establish the new center. Often, in fact, the very opening chord of the cadence-group is the hinge-chord.

Most short pieces, a single period in length, consisting of two or four cadence-groups, will have one change of key at least. This, of course, means two modulations: one to the new key, the other from the new key to the old. In such simple music it is usual to make the modulation to a key whose tonic-chord is diatonic in the original key. The dominant key, for example, has been found most satisfactory in such cases. The relative minor, if the piece is major; or the relative major if the piece is minor; the supertonic minor if the piece is major; the subdominant, major or minor; and the mediant major if the piece is major, are modulations not infrequently found.

When the modulation has been made to the new key, the return modulation must be thought out as if starting from the latter. Observe, however, that any chord which was in

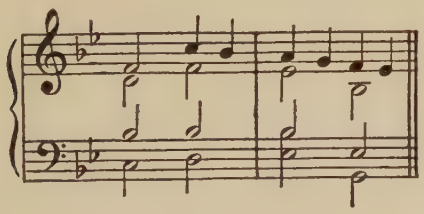
the original key re-establishes its original impression and restores the original key much more readily than would be the case in establishing a new key.

[NOTE.—The student is advised here to analyse a large number of hymn-tunes, and simple part-songs; in which he will now find few processes not familiar to him.]

EXERCISES IN MODULATION.

1. Finish the following cadence-groups with a modulation, using the last chord here written as a hinge-chord. Take care that the cadence in the new key shall fully establish the impression of the key:

1.



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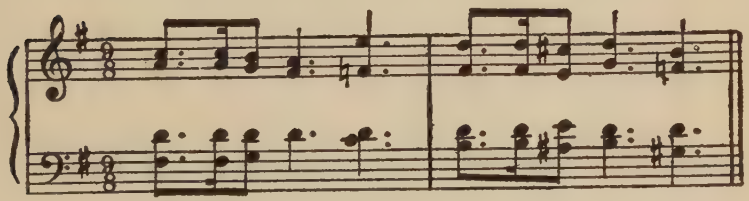

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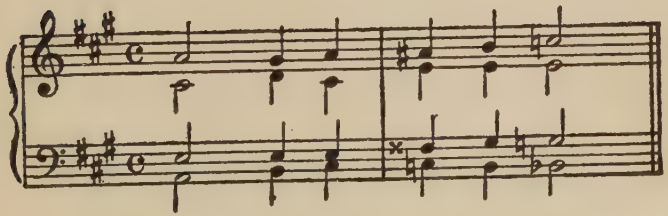


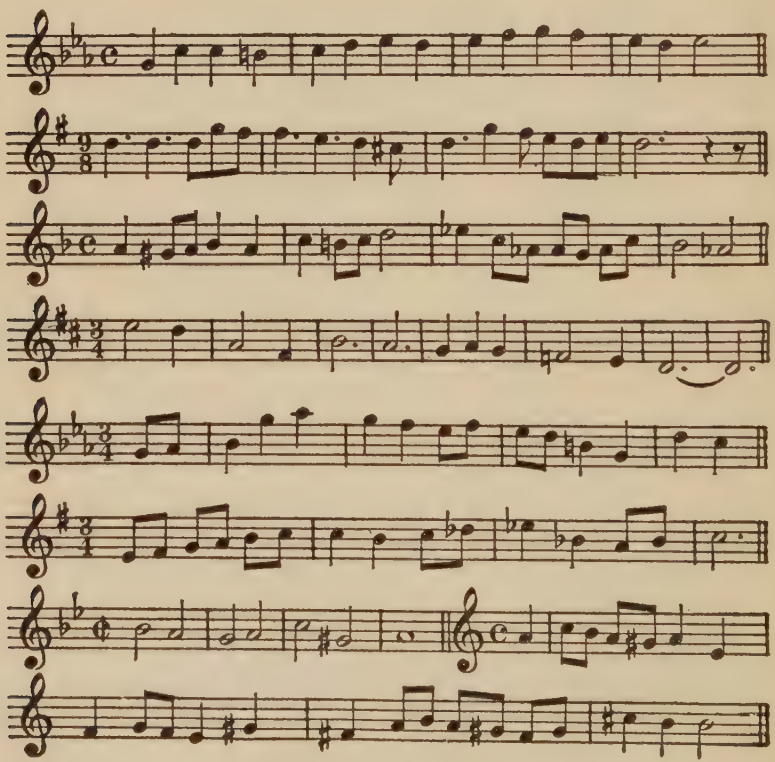
2. Complete the following chord schemes with a modulation, using the last chord indicated as a hinge-chord:

Key of E,— I IV | V-(Att. to vi)- | . Key of ♯d,— | i $\frac{b7}{d}$ iv Ger.6 |

Key of D,— I | V - vi | iii . Key of F,— i $\frac{i}{b}$ ii^{o7} - |

3. Harmonize the following melodies with modulation:

[N. B.—Observe first in what key the cadence is made; then take the earliest opportunity the melody gives to reach that key.]



4. Modulate from the key of ♭A to the key of C major, in three different ways: first, using as hinge-chord a triad common to ♭A and C major-minor; second, using as hinge-chord a diminished seventh-chord that can be attendant-chord to the tonic triad of both keys; third, using as hinge-chord an attendant-chord that will resolve into the new key by enharmonic treatment.

ADVANCED HARMONY

IN TWELVE LESSONS.

GEORGE COLEMAN GOW.

ANALYSIS OF LESSONS.

I. Pedal-point and the Non-harmonic Tones..
II. Classification and Use of the Non-harmonic Tones.
III. Freedom in Diatonic Harmony.
IV. Freedom in Non-harmonic Tones.
V. Freedom of the Tonal-chromatic.
VI. Elipsis and Free Color Chords.
VII. The Expansion of Tonality and Modulation.
VIII. Figured Basses.
IX. The Smaller One-period Form: The Chant.
X. The Larger One-period Form.
XI. Rhythm in Vocal Music.
XII. Vocal Harmony in Less or More than Four Parts. Conclusion.

ADVANCED HARMONY

George Coleman Gow.

LESSON I.

PEDAL-POINT AND THE NON-HARMONIC TONES.

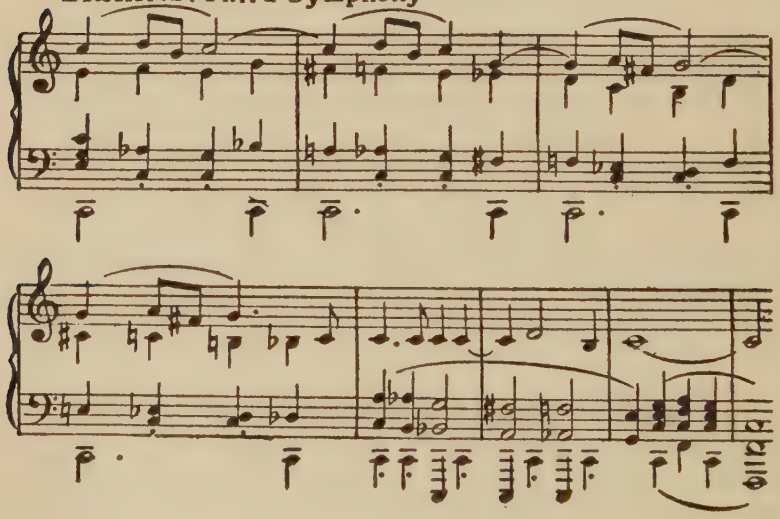
It may be remembered that in the first examples of harmony writing, when the student had one or few chords at his disposal, he was encouraged to bring to his aid certain uses of non-harmonic tones in order to preserve the gracefulness of melodic outline which is characteristic of simple, lightly harmonized music. As the number and richness of the chords increased less non-harmonic tones were needful, although occasionally very effective use was made of them. Having the complete resources of the tonal-chromatic at his disposal the student should now add the complete resources of non-harmonic material.

Pedal-Point.

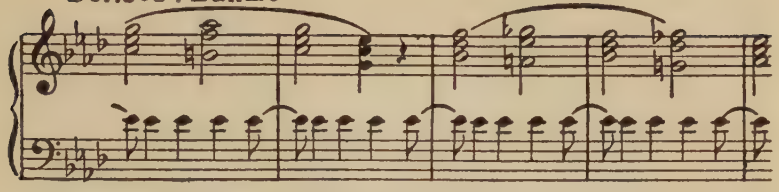
At the beginning of the study of chords an exercise was given with a single chord and a free melody based upon it. We have among the non-harmonic uses of tones a corresponding case of the single tone to which there is added a series

of harmonies. This peculiar non-harmonic tone is called the SUSTAINED TONE (the ORGAN-POINT or PEDAL-POINT). The difference between this non-harmonic tone and others which the student has already used, or will use, consists in this, that all other non-harmonic tones resolve into a chord-tone, *here it is the chord which moves into the sustained tone.* In principle, therefore, the sustained tone is a single sound used as a harmonic center, supported by a series of chords, in which those chords which do not contain the sustained tone might properly be called *non-harmonic chords* since they are the unstable part of the music, while the tone which is sustained remains the fixed center. If one has a clear recognition of this significance of the sustained tone it is easy to see why, as is the case, a sustained tone is often so powerful an aid to tonality in making climaxes. We frequently find that the tonic or the dominant of the key is made the sustained tone, and thus is given an especially strong emphasis:

BRAHMS: Third Symphony

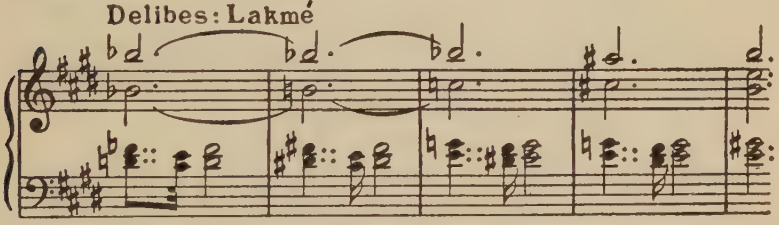


Delibes : Lakmé



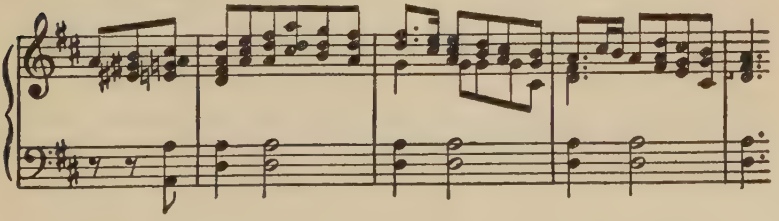
Sustained tones may be momentary or of long duration. They are found most frequently in the bass, but can be used in any upper part. In by far the most cases the sustained tone begins and ends as a note of a chord. Sustained tones held in upper voices rarely have chords to which they are non-harmonic succeed one another. Indeed the sustained tone effect not infrequently occurs with a series of chords all of which contain the tone itself. As is the case with non-harmonic tones in general the most enjoyable feature of the use of the non-harmonic chord is its resolution into the sustained tone:

Delibes: Lakmé



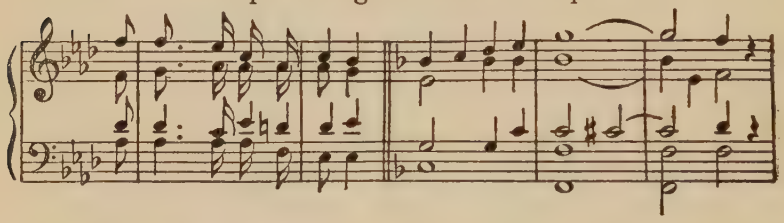
Sometimes, especially in instrumental music, there may be two sustained parts, and even triple organ-points (root, fifth, and ninth) have, not yet very successfully, been attempted:

Mendelssohn: Song without words.

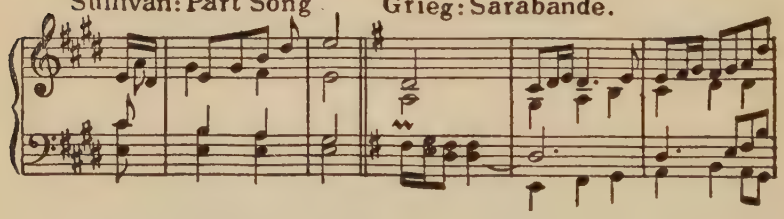


Special attention should be called to the momentary use of a pedal-point, particularly on the tonic or the dominant at the cadence. Many combinations of tone that would require elaborate explanations on any other basis may be readily understood as cases of momentary use of a stationary tone:

Mendelssohn: part song. Brahms: Requiem.



Sullivan: Part Song. Grieg: Sarabande.



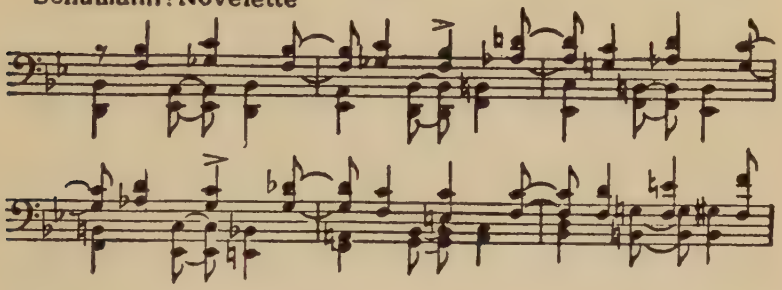
In the illustrations just given, occur what are sometimes known as *chords of the eleventh* or *thirteenth*. They are, in fact, momentary organ-points on the root of a chord accompanied by an attendant to that chord.

Retardation and Anticipation.

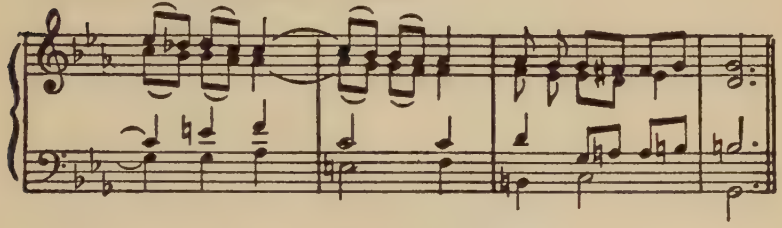
There is still another mode of dealing with chords which produces non-harmonic effects that are apparent rather than real. It is a delaying of some of the chord tones until after the remainder has begun sounding; or an entering of the new chord with some of the melodies before the time at which the chord should rightly appear. Such movements are called RETARDATIONS or ANTICIPATIONS. In either case

the effect is purely a rhythmic one, hence the laws of chord progression are in no way affected by this irregularity:

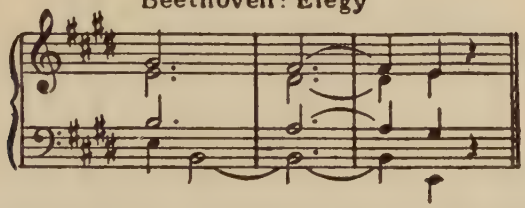
Schumann: Novelette



Bach: St. Matthew Passion



Beethoven: Elegy



When retardation or anticipation takes place with the complete chord, as in the Beethoven example just quoted, the result is simply that of syncopation. The student is advised to read carefully what is said in Elementary Theory, Lesson IX., upon rhythmic syncopation. Syncopation is a great beauty when skilfully managed, but when it introduces confusion into the rhythm, sometimes it becomes altogether unpleasant.

Non-harmonic Tones.

Let us turn now to examine in detail the character and function of the non-harmonic tones proper.

It has been a commonplace of teachers of melody to classify the tones of the major scale into the stable or inactive tones on the one hand, and the sensitive or active on the other. It has been usual in this classification to consider the tones of the tonic triad as stable, and the other tones of the scale as sensitive in more or less degree. This statement would be quite true if all melodies in the major scale were harmonized by the tonic triad alone, as was done in the first lesson in Elementary Harmony. But when other chords are used the function of the chord itself often makes a definite change in the character of a scale tone. Thus, the leading-tone as a non-harmonic tone with the tonic triad is sensitive and inclines to the tonic note; with the subdominant triad it is sensitive and frequently inclines toward the submediant note; but as the fifth of the mediant triad it ceases to be sensitive; while with the dominant triad it is sensitive and inclines to the tonic note. In other words, the discrimination which one has to make between consonant and dissonant chords, and the uses made of them to establish a unity of key makes it clear that every scale note undergoes modification as to stability of feeling, according to its place in the various chords of which it is a part, or according to its usage as a non-harmonic tone. Looked at in relation to tonality a table of stability of scale notes may be constructed as follows:

1. The most stable note is a sustained tone, until the last chord has melted into it, and it becomes merely a part henceforth of that chord.

2. The next most stable note is the tonic note of key, when a part of the tonic triad.

3. Other stable notes of lesser degree are the dominant note as part of the dominant triad, or of the tonic triad.

4. The tonic note as part of the subdominant triad.

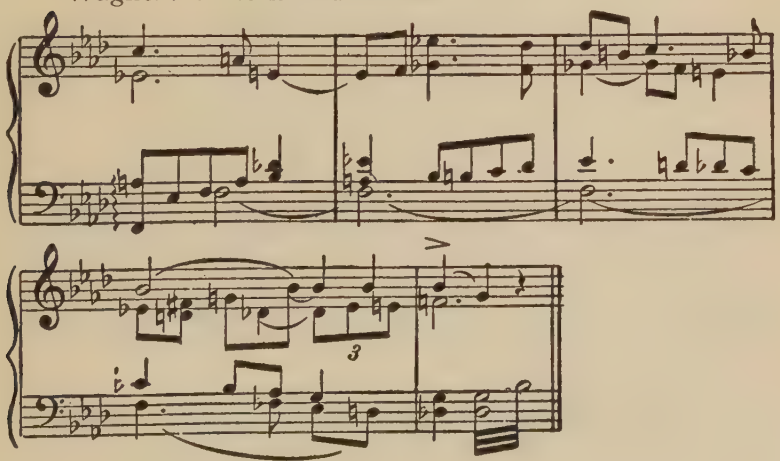
5. The mediant note as part of the tonic triad.
6. Any note as part of a principal consonant triad, except the leading-tone in the dominant triad, which is felt to have decided tendency toward the tonic.

A corresponding table can be made of the unstable notes, beginning with the least unstable:

1. Consonant notes in a dissonant chord.
2. Dissonant notes in a dissonant chord.
3. Neighboring tones to a note of a consonant chord.
4. Neighboring tones to a note of a dissonant chord.
5. All other non-harmonic tones.

The melodic law of the unstable tone is that it is being attracted toward a tone on an adjoining degree. Usually this is to the nearest scale tone — that is, a movement of a half-step would be given preference to one of a whole-step. This inclination is sometimes overruled by the scale relationships of dissonant chords. Another thing to be noticed about non-harmonic tones is that if they enter after the chord they are less harsh in feeling than if they appear at the instant the chord itself begins to sound:

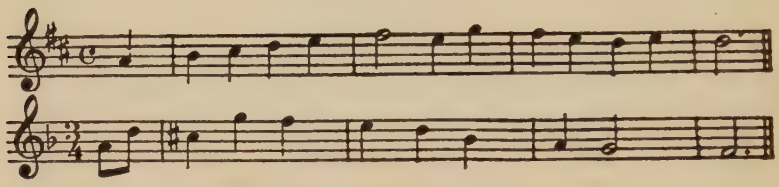
Wagner: Tristan and Isolde.



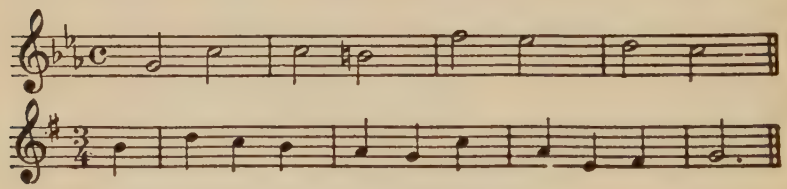
Further illustration of stable and unstable tones will be given in the following lesson on non-harmonic tones:

Exercises on Pedal-Point.

1. Harmonize the following soprano melodies above a tonic pedal-point in the bass:

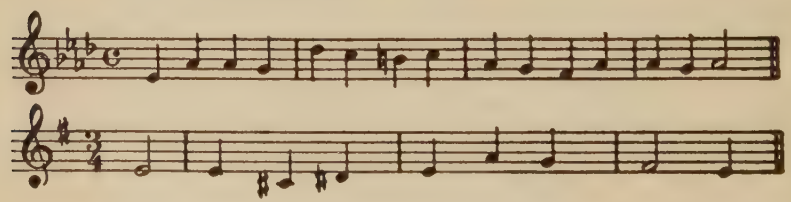


2. Harmonize the following soprano melodies except at the cadence with a dominant pedal-point in the bass:



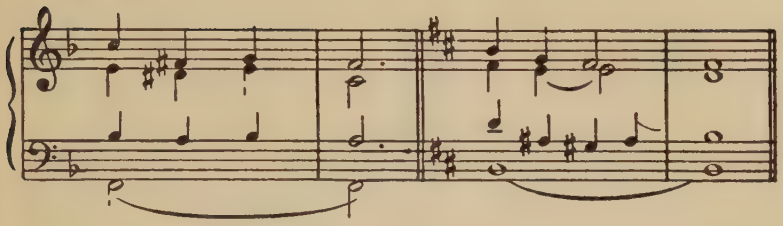
3. Harmonize the second melody of each of the exercises above with a sustained tone in the tenor.

4. Harmonize the following alto melodies with a sustained tone in the soprano:

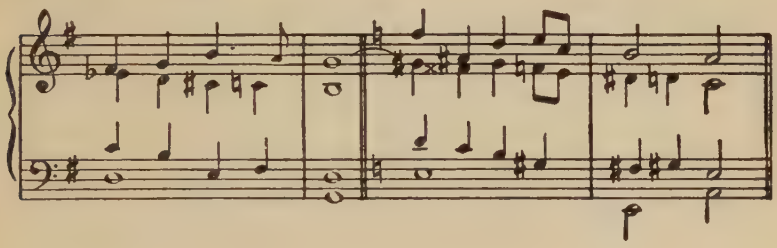


5. Write a number of cadences containing attendant-chords to the tonic, against a tonic pedal-point in the bass.

Thus:



6. Write a number of cadences containing attendant-chords to the dominant, against a dominant pedal-point in the bass. Thus:



LESSON II.

THE CLASSIFICATION AND USE OF NON-HARMONIC TONES.

Non-harmonic tones are classified as PASSING-TONES, AUXILIARY or ALTERNATING-TONES, SUSPENSIONS and APPOGGIATURAS. In most uses these are all NEIGHBORING-TONES (see Elementary Theory, Lesson XI). The SUSTAINED-TONE is also to be classed as a non-harmonic tone.

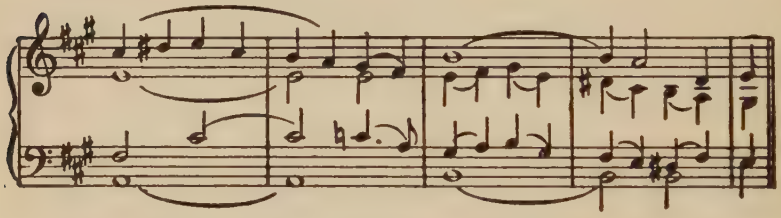
PASSING-TONES.

PASSING-TONES are those non-harmonic tones which fill in by conjunct motion what would otherwise have been

a skip from one chord tone to another. The passing-tone usually enters after one chord and resolves with the next chord; but sometimes it enters with the chord into which it resolves. To use it correctly one must take care:

1. That it lies in a proper melodic scale progression from chord note to chord note.
2. That it does not create the impression of a faulty chord.
3. That it does not introduce faults into the parts:

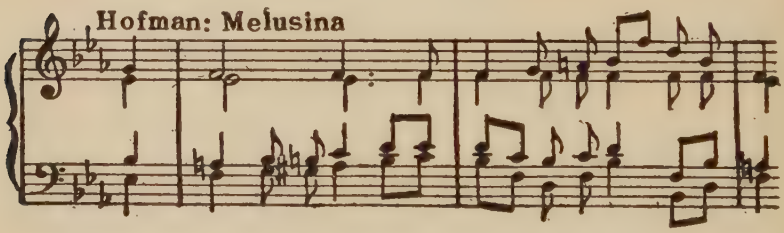
Brahms: Requiem.



Occasionally two or more passing-tones follow one another in order to fill up the skip of chord tones.

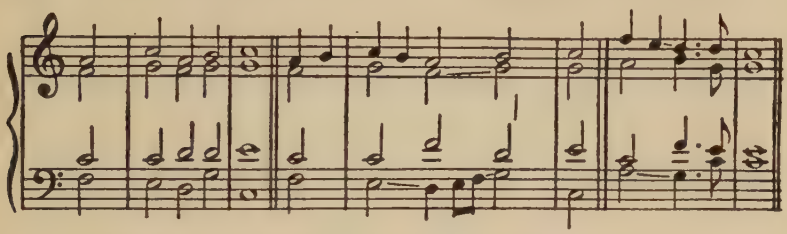
Thus:

Hofman: Melusina

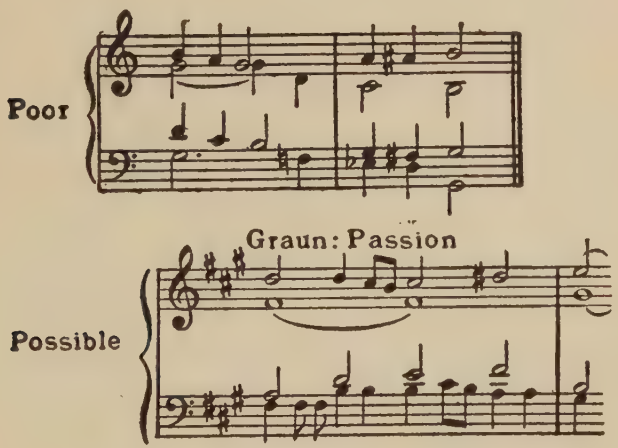


The faults liable to occur are the introduction of parallel fifths and octaves through the use of passing-tones. If in the chords without passing-tones two parts would have reached a fifth or an octave by similar motion the introduction of the passing-tone will bring about parallel fifths and octaves. The parallel fifths made by passing-tones are less

objectionable than are the parallel octaves; but if the student should find an unpleasant result due to the introduction of the passing-tones this may point out the reason:

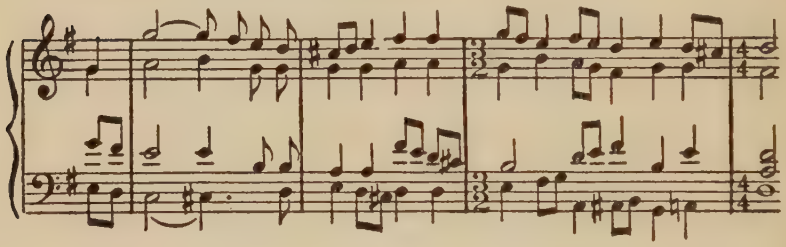


Another fault liable to occur is when a third is made to come into unison on either of the notes of the original third, as frequently happens when two positions of the same chord follow each other. Here the introduction of the passing-tone in the part that moves creates confusion through the sense of the disappearance of the dissonant second without resolution. In some cases where the tone that is held over is sufficiently strong and distinct in character from the moving part it can successfully maintain itself after the manner of a sustained tone; but usually this effect is an unpleasant one.



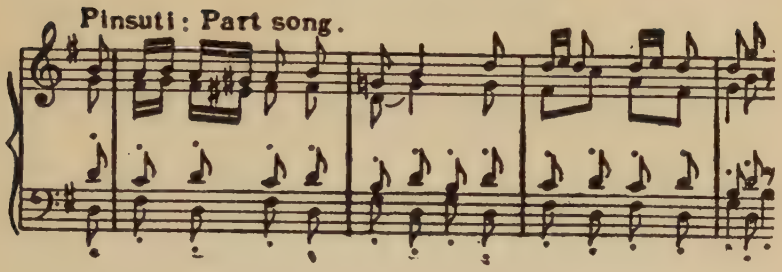
Passing-tones frequently occur in two, three, or even in four parts at the same time. When several such passing-tones appear at once a decidedly harsh impression is created unless the tones harmonize well with one another. For this reason tones passing in consonant intervals such as parallel thirds and sixths are usually chosen. Such passing-tones frequently create an acceptable new chord which is called a *passing chord*. The student's attention has already been drawn to some illustrations of such chords:

Wagner: Die Meistersinger.



Auxiliary or Alternating-Tones.

Auxiliary or alternating-tones are neighboring-tones which occur between repetitions of the same note. The alternating-tone is used exactly as the passing-tone except that it returns to the same note it left, and for that reason, like all neighboring-tones, is but a whole or a half-step from the tone to which it goes. The under alternating-tone is more apt to be a half-step, chromatic if necessary. The student may observe that the turn is merely the use of first, the upper and then the lower alternating-tone, between repetitions of a note; or, occasionally, first, the lower and then the upper:



Suspensions.

Suspensions are chord-tones, which having been retained after the chord is changed, are made into neighboring-tones to notes in a following chord.

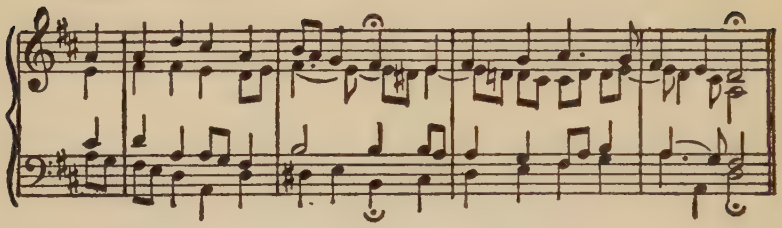
[Note.—This change of signification in the value of a tone is to be compared to the change of meaning in the enharmonic chord where each tone is shifted to another place in the chord.]

As in the case of passing-tones, and of alternating-tones, the essential thing in suspensions is—

1. That they make correct progression;
2. That they do not create faulty chord meanings;
3. That they do not produce faulty movements of the parts.

It is to be noticed that, since the value of the suspension consists in the change of significance of the tone, although the melodic motion is the same as that which would have occurred without the suspension, the stronger the dissonance made at the moment of the new chord the more satisfactory will be the suspension:

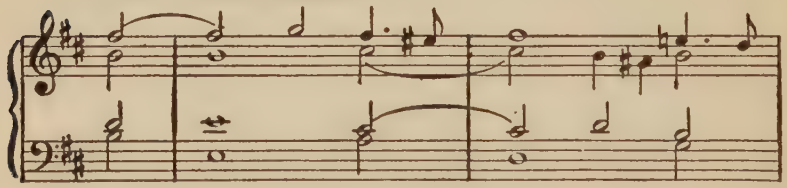
Bach: Chorale.



Suspensions which are not dissonant, but which create, with other notes of the new chord, a real chord of its own are felt to be weak, and, only rarely, have a rhythmic value. Two important cases of such rhythmic suspension value are the substitute chords, I and iii, with which the student is already familiar. c b

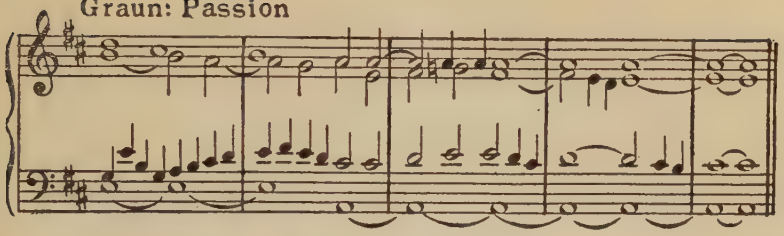
Suspensions may be upward as well as downward, and in very rare cases the same tone, doubled in the voice parts, may be made a suspension both up and down:

Dvorak: Stabat Mater

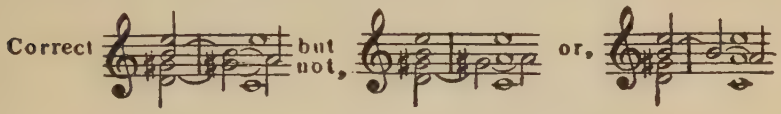


As was the case with the harsh subordinate seventh chords (treated in Lesson IV., Elementary Harmony), historically there has been much caution in the introduction of the suspension. The rule for the introduction of the suspension, called the "preparation of the suspension," was that the tone must be heard in the previous chord, as a chord tone, at least as long as it is held in suspension, and that the suspension should not be restruck. Modern writers violate freely this rule, but the student is advised to notice the value of it in rendering the effect smooth and rich:

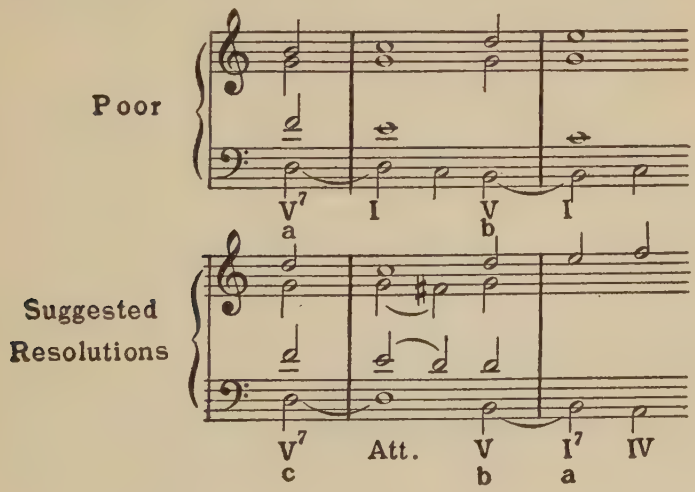
Graun: Passion



Certain faults may be created by suspension; thus, two parts which might double at unison in the second chord cannot admit suspension unless they are both suspended and both resolved at the same instant:

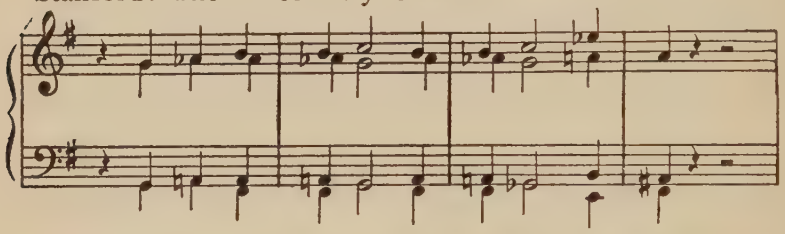


It is also usually unsatisfactory to have a suspension in one part and the upper octave of its resolution in another part; since the dissonant interval of seventh or ninth thus made suggests a different resolution:



Suspensions frequently occur in two or three parts both ascending and descending; and even suspensions in all four parts may occur. These last are similar in idea to passing chords, and are only to be distinguished from prolongations or repetitions of the preceding chord because of their rhythmic effect of syncopation, and by the decided tendency of all of the parts into the new chord:

Stanford: The Three Holy Children.

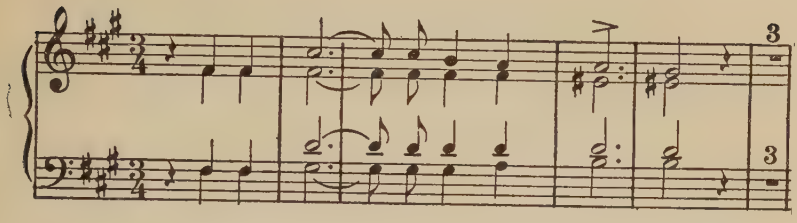


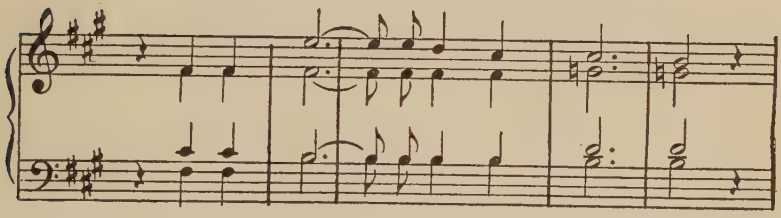
In conclusion it must be emphasized that the important prerequisite of suspensions is that the original chord connection be itself a satisfactory one, and that the parts which are to be used as suspensions would originally have moved a whole or a half-step into the new chord.

Appoggiaturas.

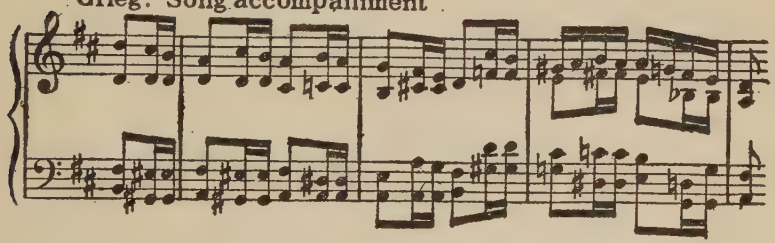
Appoggiaturas are neighboring-tones which come to their places by skip, and are heard at the moment of the new chord in the place of the chord tones to which they later resolve. Passing-tones which enter with the chord, and suspensions which are restruck with the chord, are also sometimes called appoggiaturas. The appoggiaturas proper, which enters by skip with the chord, affords the strongest feeling of tendency which a tone may have. Perhaps it is for this reason that many of the Nineteenth Century writers have developed a special fondness for it in connection with tendency chords — a sort of piling up of the impression of urgency forward:

Goetz : Noenia

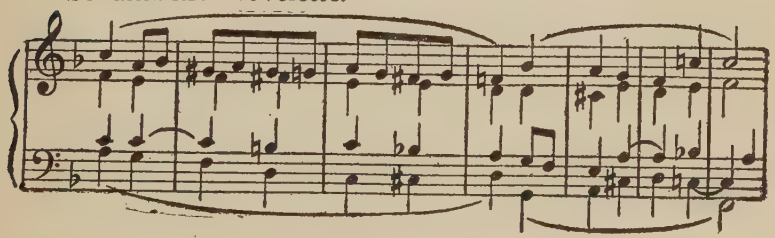




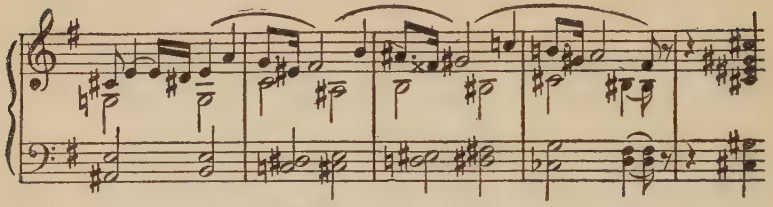
Grieg: Song accompaniment



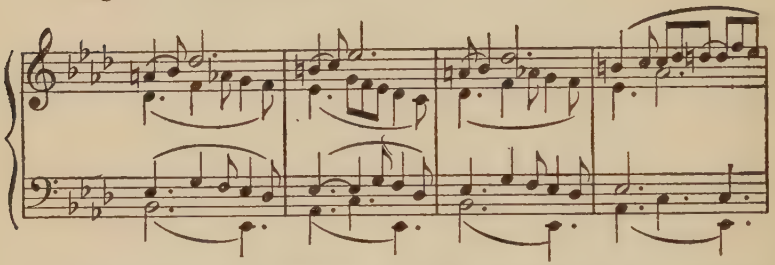
Schumann: Novelette.



Delibes: Lakmé.

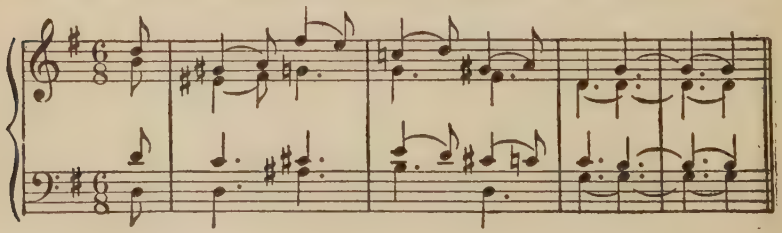


Wagner: Meistersinger.

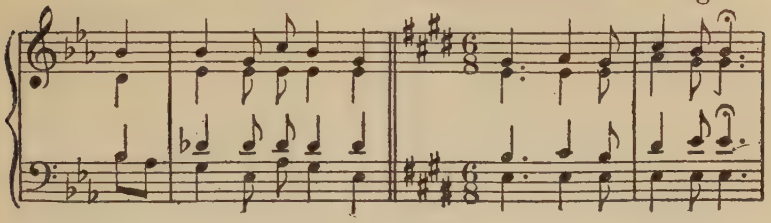


Notice in the last measure of the example from Wagner, just given, the effect known as DOUBLE APPOGGIATURA, which is, in fact, a turn, with the first two utterances of the main note omitted, so that the upper and lower alternating-tones are made into appoggiaturas to the final note.

Appoggiaturas also may appear in two or three parts, but the fact of skips in their introduction renders this more difficult. It is a general truth that skips in one or more voice parts need to be offset by smooth writing in some other parts; although skips in all parts into a tendency chord are liable to occur. Skips to non-harmonic tones are less easy to understand, and thus are apt to seem less beautiful:



Hofmann: Melusina. Mendelssohn: Part Song.

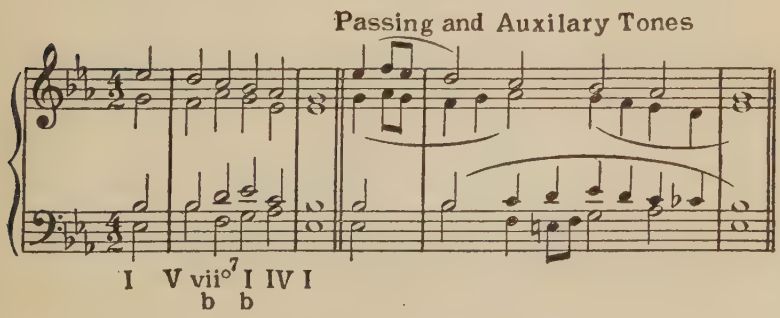


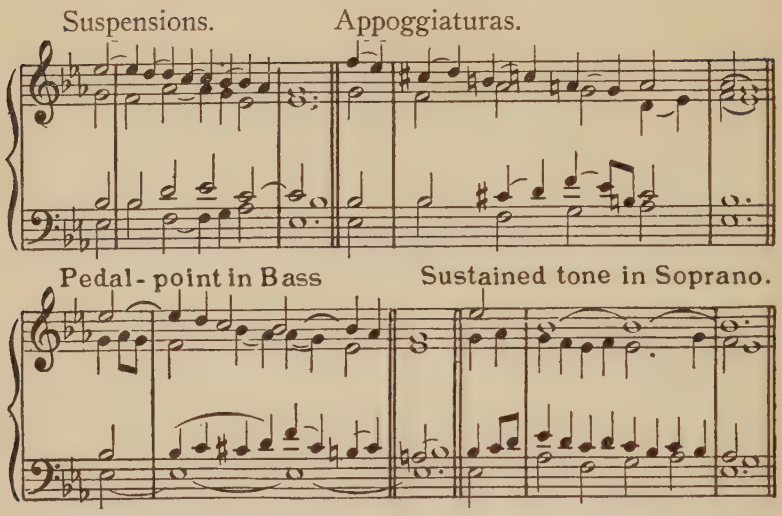
Notice, that the last illustration from Mendelssohn is explainable equally well as a tonic pedal-point.

Exercises in the Use of Non-harmonic Tones.

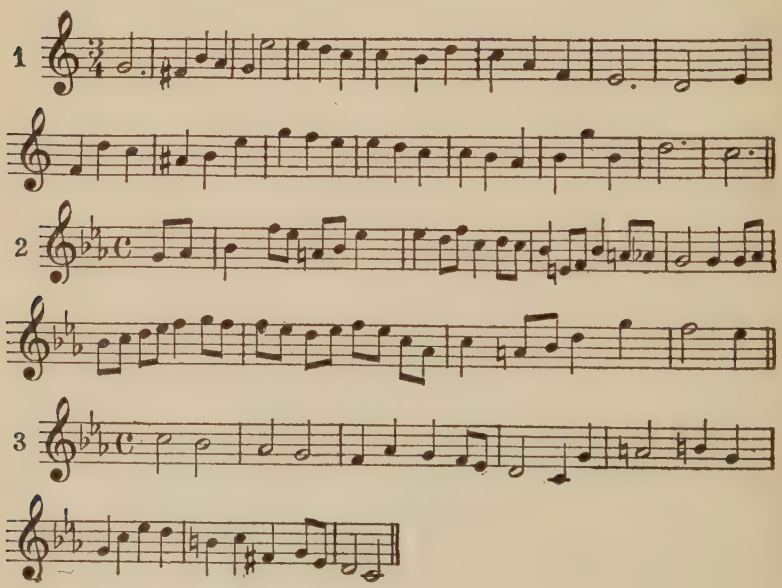
1. Write a number of cadence-groups of simple chords. Rewrite each sketch, adorning it successively with passing-tones and auxiliary tones, with suspensions, with appoggiaturas, and finally, in order to establish the relationship of these ornamentations, endeavor to utilize the same chord-scheme as the basis of a pedal-point, using freely whatever other non-harmonic tones seem valuable.

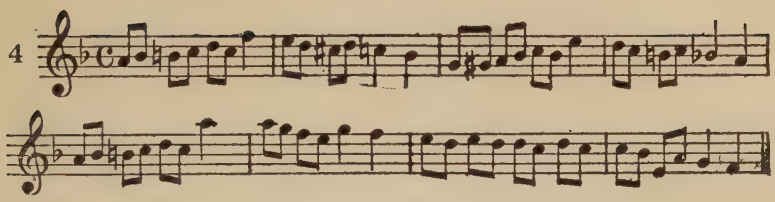
As an example of what is desired, observe the following illustrations:





2. Harmonize the following melodies, making free use of non-harmonic tones:





LESSON III.

FREEDOM IN DIATONIC HARMONY.

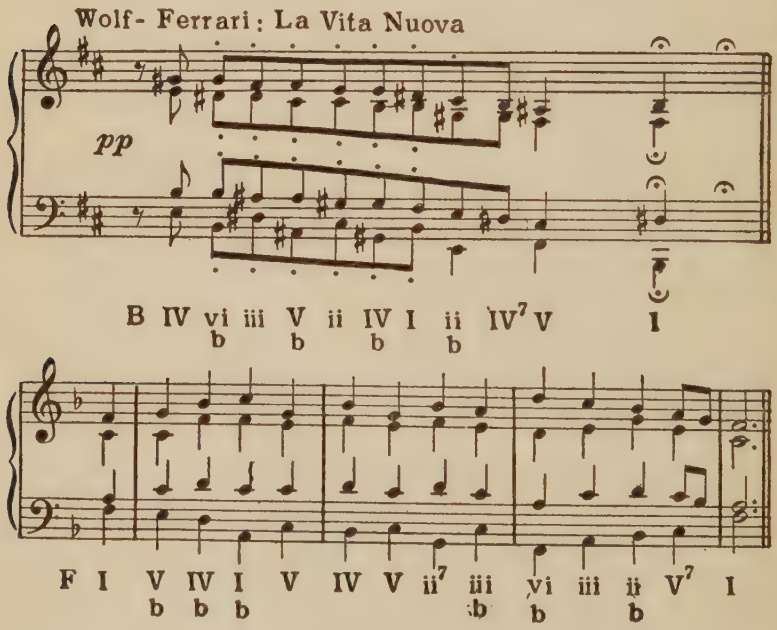
For the student who has come to understand harmonic and melodic material, as presented up to this point, and has also gained facility in thinking and in writing with this material, the further mastery of those freedoms in treatment which enter so much into modern writing will offer no serious difficulty.

All true art tends toward a state in which there is the greatest flexibility which can exist together with definiteness of purpose. The problems of the student heretofore have been wholly directed to a single end, namely, to make definite the key relationships of the chords. Even the non-harmonic tones, although they are distinctly used as a means of variety, have themselves been utilized in accordance with their natural laws. When we undertake to classify the various attempts at a freer treatment of musical material two things become plain; in the first place, the freer treatment is the unexpected treatment; in the second place, the possibility of the unexpected depends upon the certainty of expectation of the process which is given up. A complete and continuous abandoning of the natural process would defeat the very end desired.

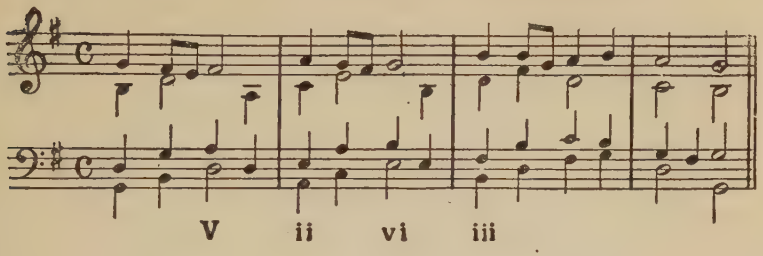
In passing in survey the freedoms which are already in common use by composers some hints may be gained of the possibility of other and similar freedoms not yet in use. The survey will follow an order based upon the comparative simplicity of the modifications of the usual processes.

Freedom in the Order of Scale Chords.

It has been constantly in the view of the pupil heretofore that the choice of chords in a scale is dictated by the desire to keep clear the impression of the scale (its tonality). Manifestly, if at any point the writer of the music either feels the key impression sufficiently strong to warrant exceptional treatment, or purposely desires to create a sense of the unusual that if carried to excess might cause doubt as to the key, he will change the ordinary order of the chords. Movements from the dominant chord into the subdominant with both chords in fundamental position, or from the dominant chord to the supertonic chord, or a prolonged treatment of the subordinate chords of a key without reverting to the principal chords to restore balance, or persistent use of the weak progression from subordinate chord to principal, are illustrations of this freedom:

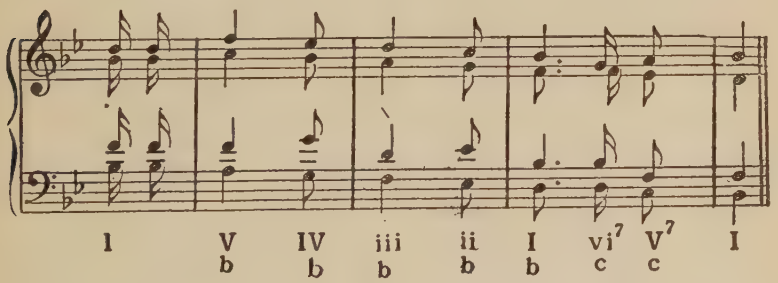


Another illustration is found in the upsetting of the usual chord order when a sequence is being carried out:



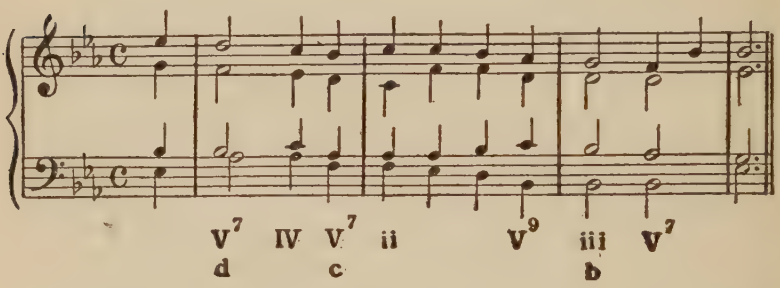
This latter is due to the fact that a melodic consideration takes the place of the harmonic for the time being.

Another very common illustration of the same sort is the use of a scale passage harmonized by a series of first inversions of triads. The melodic interest here is greater than the harmonic:



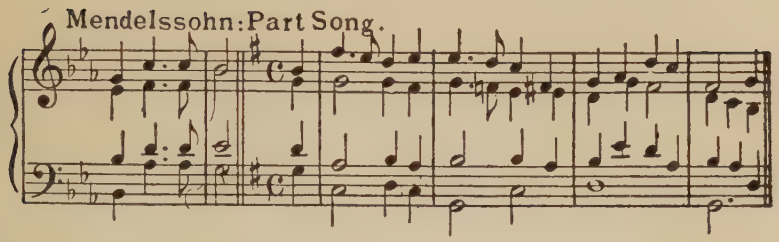
Unusual resolutions of seventh chords also come under this head. It has already been brought to the attention of the student that the dissonance of the seventh finds its natural resolution in the smaller intervals of the sixth or fifth, and that the two important resolutions of seventh chords are that into the triad whose root is the fourth above the root of the seventh chord, or that into the triad whose root is the degree above. In the series of resolutions heretofore given the only one which would contradict the usual order of

scale chords is that from the mediant seventh chord into the subdominant; but other resolutions of the seventh chord are frequently made, in which the same general law of dissonance is observed. For example V^7 to iii, V^7 to IV, V^7 to ii, etc. Notice here that we are discussing not unusual movements of the parts, but an unusual order of chords. The fact of an unusual resolution of the chord requires more than ordinary emphasis to be put on the simplicity and smoothness of the progression of the parts:

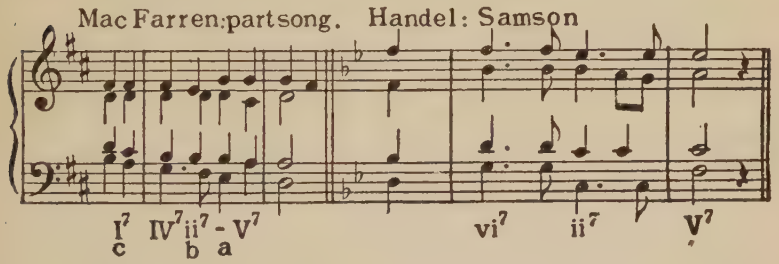


Freedom in the Treatment of the Voice Parts.

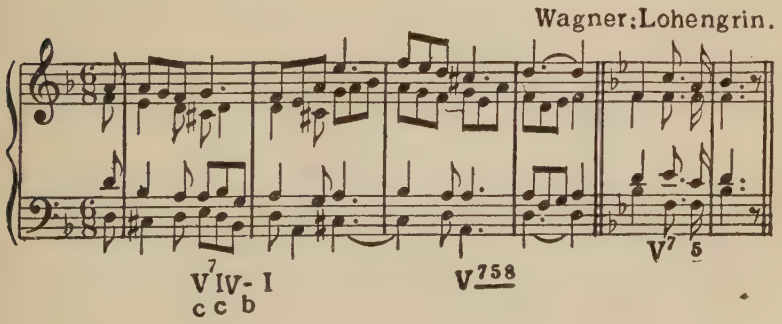
The object of the student in all of his work heretofore has been, not only to make the order of chords seem natural, but also to have the movement of melodies in the parts seem, as far as possible, inevitable. In order to do so it frequently has been necessary, especially in the inner parts, to sacrifice a striking melodic outline, and cause the result to be monotonous, though smooth. Yet the opportunity often arises of taking a somewhat wide skip, even in the inner parts, which does not sacrifice the clarity of chord relationship, or the smoothness of chord connection. In the interest of melodic freedom this is a well-recognized procedure. To offset it, usually some one or two parts are made to move in very smooth progression:



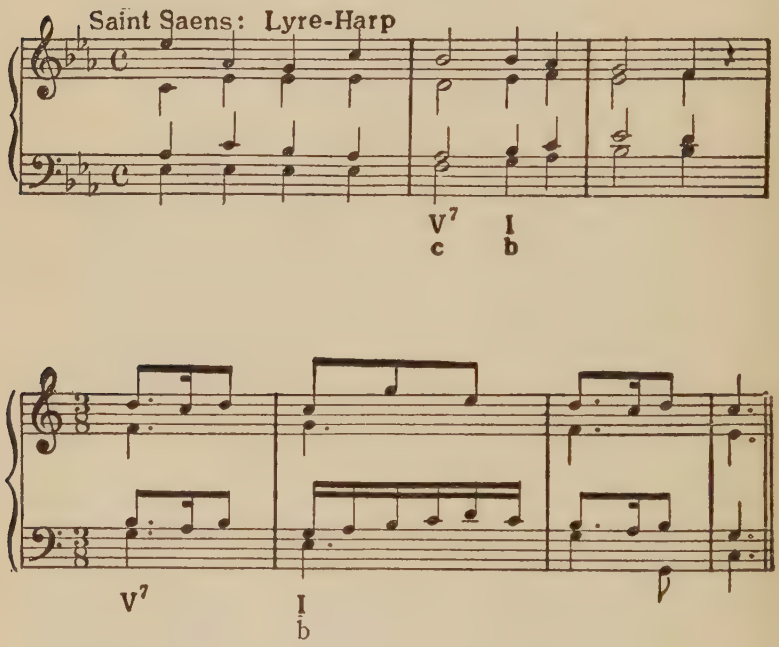
Again, it is not uncommon, as the student may already have observed, to resolve one seventh chord to another directly; care being taken that the seventh of the new chord comes smoothly to its place and that the seventh of the first chord resolves equally smoothly:



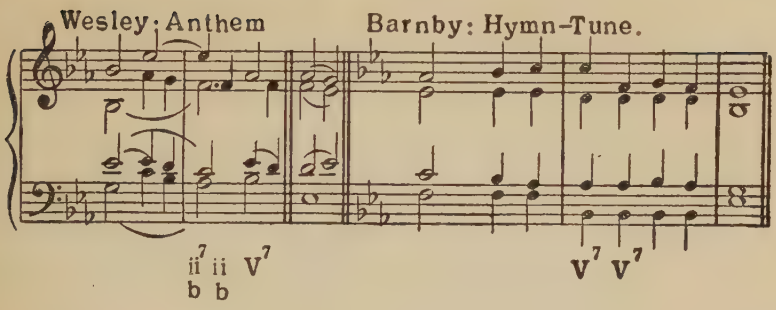
Occasionally between a seventh chord and its resolution one or two other chords may be inserted, or the triad without the seventh may appear, as has already been brought to the attention of the student:



Again at times in a cadence resolution of the seventh chord (i. e. to the fourth above), the seventh of the chord moves up contrary to its tendency. This is frequently a case analogous to that of the passing-chord (see Lesson II.); but it is sometimes resorted to to avoid concealed octaves onto the resolution tone of the seventh. For example, v^7 to $\frac{I}{b}$:



Somewhat rarely the strong tendency tone, such as the seventh or ninth of a chord, is left by skip with no apparent resolution. This can happen only when the ear recognizes and supplies in mind the true resolution. It can therefore only happen when in the structure of the following chord there is no hindrance to such a mental resolution:



Exercises in the Use of Freedoms in Diatonic Harmony.

1. Compose the following chord-schemes, noticing with special care any unusual order of chords, or unusual resolutions of chords demanded:

Key of D♭. Accent-group-Form-.4,1,2,3

I | V7 - IV V7 | I vi V IV | vii°7 I iii ii | iii V7 I ‖
b b b b b b

Key of e. Accent-group-form, 3,1,2.

i | i 7iv | vii°7° VI III+ | ii°7 V7 i V7 | i - ‖
b b b c b

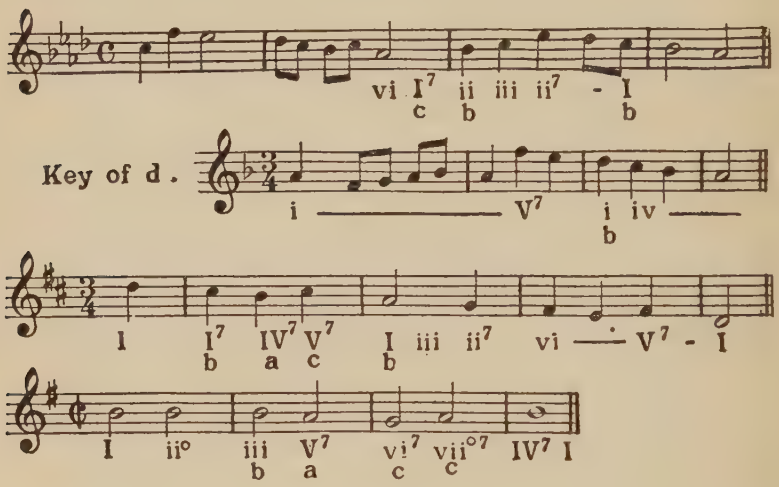
Key of A. Accent-group form, 1,2,3,4.

I - IV V7 | vi7 ii7 vii°7 iii7 | vi V7 I vii° | I - - - ‖
b b b d c b b

Key of F. (Sequence formula.) Accent group form, 1,2,3,4.

I vi7 vii° V7 | vi IV7 V iii7 | IV ii7 iii I7 | V7 - I - ‖
b b b b b b

2. Harmonize the following melodies, using at the places indicated the chords named:



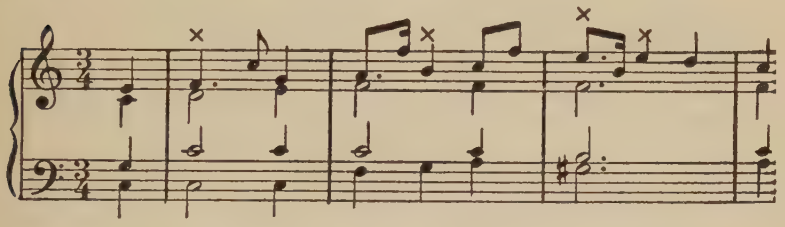
LESSON IV.

FREEDOM IN NON-HARMONIC TONES.

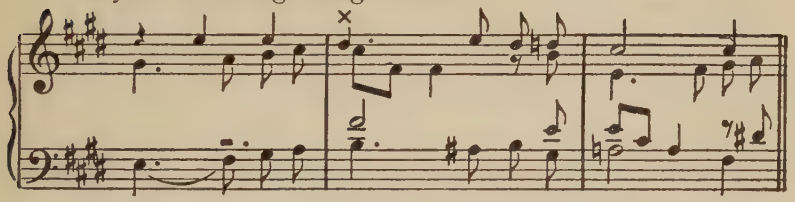
Freedom in non-harmonic tones is always a case of retarded or of interrupted resolution, the non-harmonic tone always being a sensitive tone (one that has been given a certain inclination). If that inclination is not carried out, or is temporarily interrupted, the effect is that of the unexpected. The following examples are all illustrations of such unexpected treatment:

A passing-tone may be followed by a harmonized note which it reaches by skip, and then may return to the note to which it should properly have gone in the first place; or before the insertion of a passing-tone the skip may be made to another chord-tone, and the return may then be made by

skip to the passing-tone in question; or a passing-tone, after being taken, may be left and returned to once more, and on second hearing may be left according to its tendency:

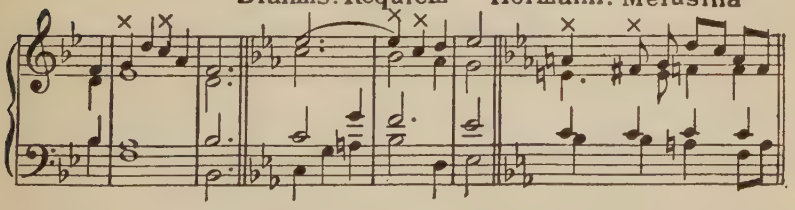


Haydn: Evening Song to God.



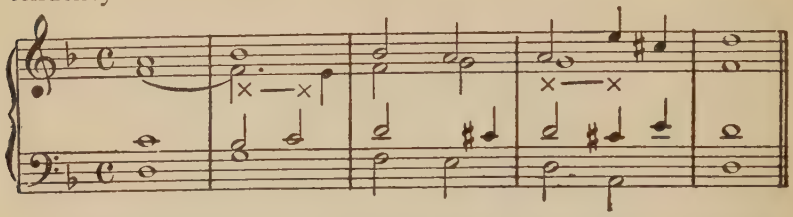
The skip from one non-harmonic tone to another may be made, followed by the resolutions of both, in whichever order seems convenient. Notice that the double appoggiatura is such a case, in which each of the non-harmonic tones is inclined to the same resolution:

Brahms: Requiem Hofmann: Melusina



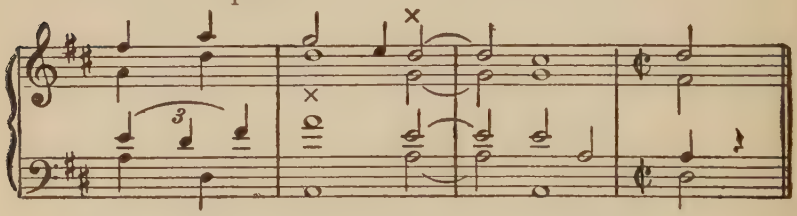
The resolution of a suspension may be delayed by the interposition of other chords in which the tone also appears as a suspension. Occasionally, the chord introduced is one in

which the suspension-tone has become once more a chord-tone; but the suspension-tone should ultimately follow its tendency:



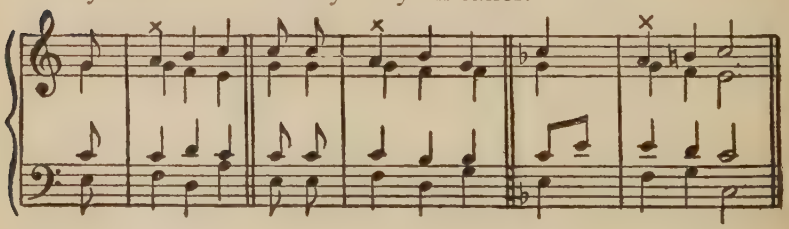
The suspension is sometimes left in one part, but picked up in another part; that is, the chord is repeated with a change of voices, and the part which takes the suspension in the repetition carries on the resolution:

Brahms: Requiem.

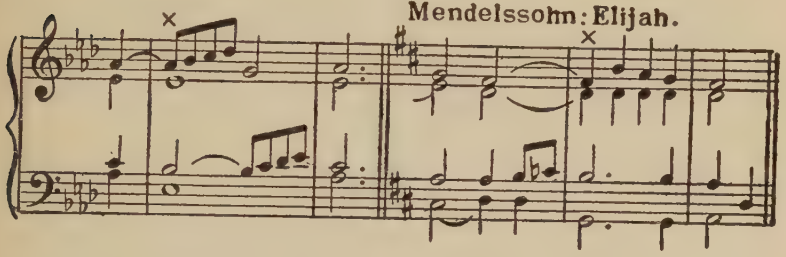


A slight but very common form of the unusual comes when the suspension instead of resolving into its chord comes to its resolution at the moment of the appearance of a new chord:

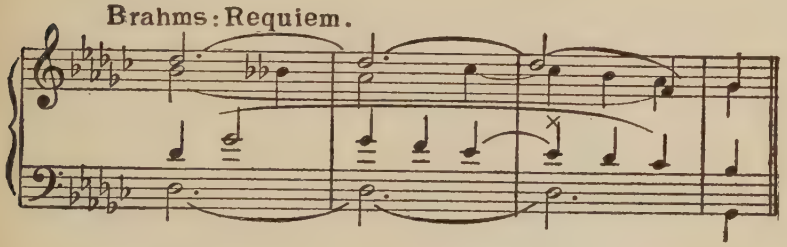
Lahee:
Hymn-tune. Barnby: Hymn-tunes.



Instead of a skip from a suspension, the note to which the skip might be made can be reached through a series of passing-tones, and the return from that note be made by skip; or the skip may be made from the suspension, and the return to it made by melodic passage:



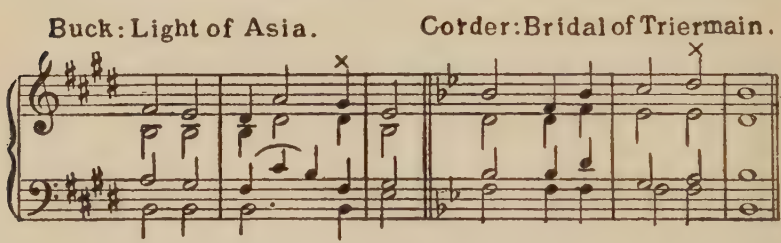
In some cases we find a passing-tone halted in its progress and changed in character while it is sounding; as, for example, becoming a suspension with the chord that follows:



Perhaps the boldest license in the use of non-harmonic tones is that of leaving them without resolution at all. This is to be compared with the freedom of omitting the resolution of strong tendency notes of a chord; and like the former case, can only be permitted when the inclination is so manifest that the ear supplies the resolution unconsciously. As was said in regard to non-resolution of chord-tones, it can

only happen when the structure of the following chord is such that there is no hindrance to the mental resolution. A successful use of this device is very delightful.

One very common illustration of this is the use of the neighboring-tone above the fifth of the dominant seventh chord without resolution into the chord, passing instead directly to the proper note in the following chord. Some theorists call this a real chord-tone, naming the combination the dominant thirteenth chord:


Buck: Light of Asia.
Corder: Bridal of Triermain.

Exercises in the Use of Freedoms in Non-harmonic Tones.

1. Introduce into the following chord-schemes various freedoms in the use of non-harmonic tones:

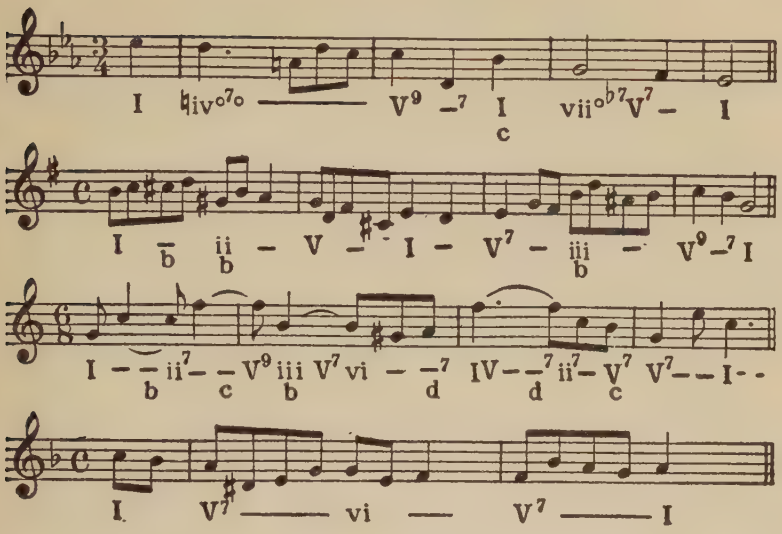
Key of D. Accent group form 4.1.2.3.

I | I -7' IV -7'' | V iii7 IV ii7 | iii V7 V9 -7 | I - - ||
b b

Key of B♭. Accent group form 1.2.3.4.

I I+ IV - | ii7 #ii ♭5 7° I - | vii° I iv♭3 V | iii V7 I - ||
b c #3 c b b b b

2. Harmonize the following melodies, using the chords indicated:

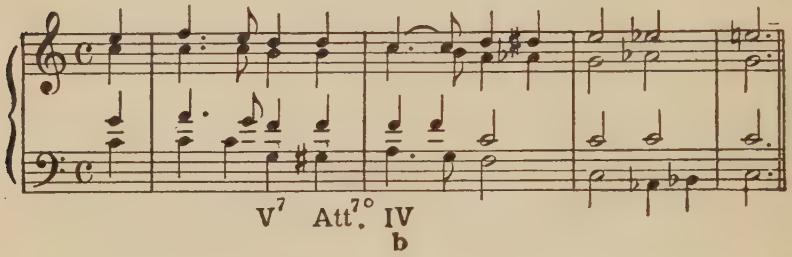


LESSON V.

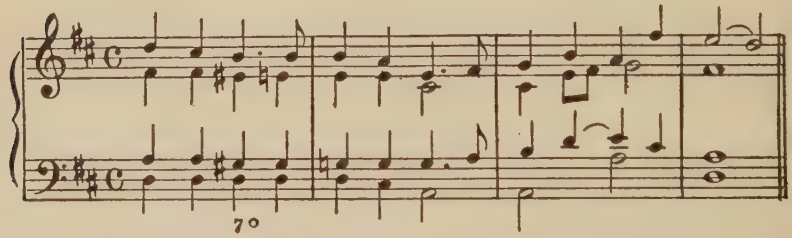
FREEDOM IN THE TONAL CHROMATIC.

The chromatic chords which have been presented to the student up to this point were viewed either as color chords in the mixed modes, or as attendant chords to given scale triads. This is the usual method of treating such chords, and it is upon such treatment that the still freer usage is based, as will be seen presently. The chromatic chord is always a chord having a special color. As a color chord one may see that it very naturally follows the ordinary scale chord upon the same degree; and that several color-modifications of the same chord might follow one another, even although the chord by such modification was given a different inclination.

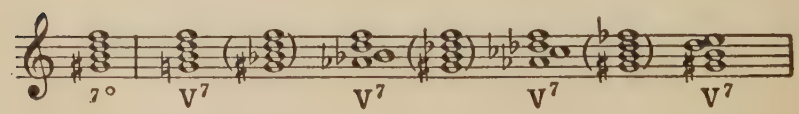
Thus, for example, the dominant seventh chord may be made into a diminished seventh chord by the raising of its root; even although this alteration of the root cuts out of the possible resolutions the original, most important one into the tonic chord:



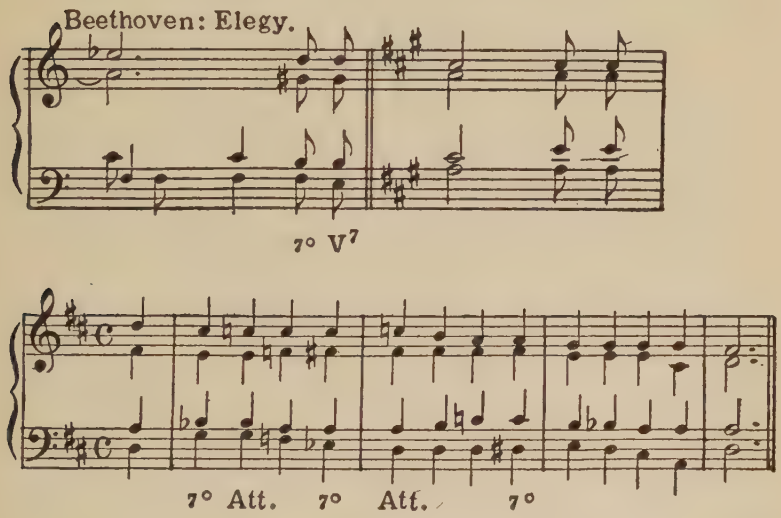
In like manner the chromatic diminished seventh chord by suitable modification may be changed into other forms of the chord upon the same scale-degree, and thus cause a different tendency, and a different final resolution to prevail:



Remembering the structure of the diminished seventh chord, it is easy to see how by lowering one of its tones a half-step, it is made into a dominant seventh chord, or to the enharmonic of the dominant seventh chord:



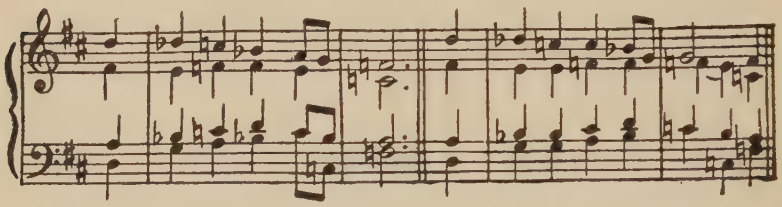
This fact becomes important in modulation where the diminished seventh chord is used. Since the change of the leading-tone seventh chord, which is capable of so many interpretations (see Elementary Harmony, Lessons X. and XII.), into the dominant seventh chord, which owes its allegiance to but one tonic, may tighten the bonds of the new key, even before its central chord has been reached:



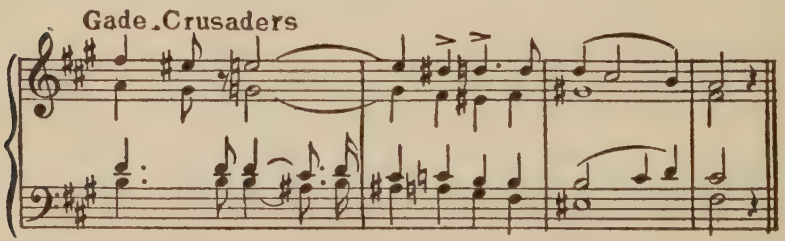
Notice in this illustration that the two diminished seventh chords followed by the dominant seventh attendants have developed quite a strong modulatory feeling, although they are neither of them completed by a cadence in the new key; while, on the other hand, the diminished seventh chord attendant standing alone which resolves immediately to its triad, offers not the slightest check to the use of that triad as a supertonic chord on its way to the authentic cadence which ends the line.

The method of modulation just illustrated is of frequent assistance in establishing a change of key which would

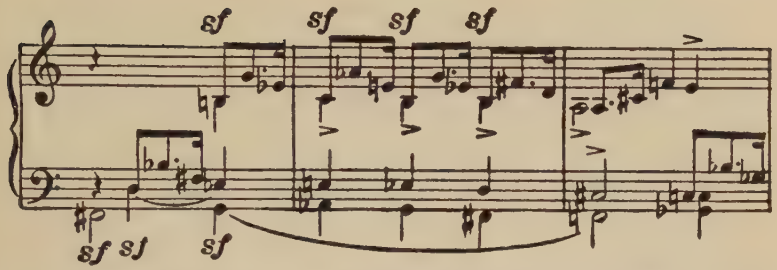
otherwise seem too abrupt. Thus, compare the two following modulations from D major to F major:



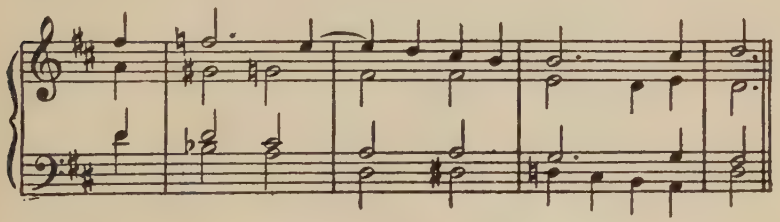
The lack of definiteness in the diminished seventh chord, since each tone of it by proper interpretation can be given a tendency either up or down, has always marked this chord as a sort of a musical nomad. Because of its unrestfulness there is a sensation of excitement in the use of it; and prolonged excitement can be gained either by repetition of the same chord over and over again in different positions or by the frequent introduction of it between other chords. Indeed composers have not hesitated to make use of it in a chromatic series up or down, one diminished seventh chord following the other until finally the last one resolves into some other form of chord:



Another nomadic chord which has in recent years been given a facticious importance is the augmented triad. Like the diminished seventh chord it can easily be used in chromatic series. Wagner made very effective use of successions of these chords in Siegfried:



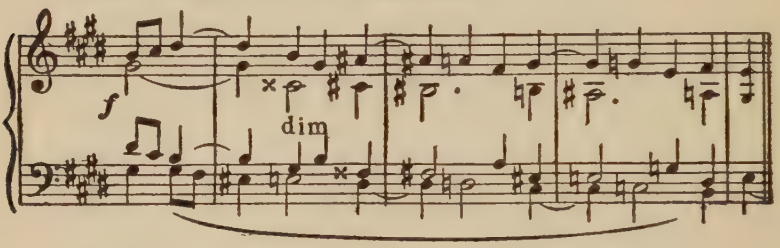
The resolution of one seventh chord into another which the student has already met in diatonic progressions, finds frequent exemplifications in chromatic chords. One interesting outcome which bears upon the writing of the chromatic scale should be noticed. If the tendency of one of the tones of a chromatic chord is to move upward to the root of the following resolution triad, the substitution of the seventh chord in place of this resolution triad will cause that chromatic note to move down to the seventh of the chord by chromatic alteration on the same degree; that is, as if it were merely a color substitute note instead of also a chromatic tendency note:



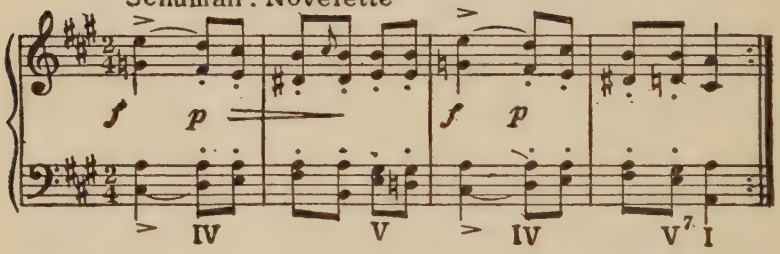
The student should be reminded again that chromatic tones of dissonant chords always show tendency. This feeling of tendency in tones of chromatic chords is the strongest impression of inclination which is to be found among chord tones. It is to be compared to the accented appoggiatura among the non-harmonic tones. A chromatic tone may, to be sure, give place to some other color substitute, but when

the moment arrives for moving from one chord to the next the tendency of the chromatic tone needs to be gratified:

César Franck: La Procession



Schuman: Novelette



The material of the tonal chromatic, handled in the free way indicated above, gives to the composer without any necessary change of key:

1. Diatonic chords and diatonic non-harmonic tones.
2. Chromatic color substitutes.
3. Chromatic tendency chords to any of the consonant triads of the diatonic or mixed modes.
4. Chromatic modification (before resolution) of any of the chords already mentioned.
5. Chromatic non-harmonic tones with any of the chords already mentioned.

To this material and treatment there needs only to be added the mastery of the relationship of keys and of the function of modulation (see Elementary Harmony, Lesson

XII., as to the means of modulation), and the student has the essential harmonic equipment of the Nineteenth Century composer. At this point, therefore, he is strongly advised to spend much time in developing his power to write easily and effectively within the tonal chromatic of a single key, making choice of a good variety of treatments both in his chord schemes and in his harmonizations.

[NOTE.—From this point onward in these lessons the Roman numeral indication where used will for the most part give but general guidance; i. e., a V will be used to indicate that the chord is dominant, whether it be with or without the seventh, whether it be in fundamental position or in inversion.]

EXERCISES IN THE USE OF THE TONAL CHROMATIC.

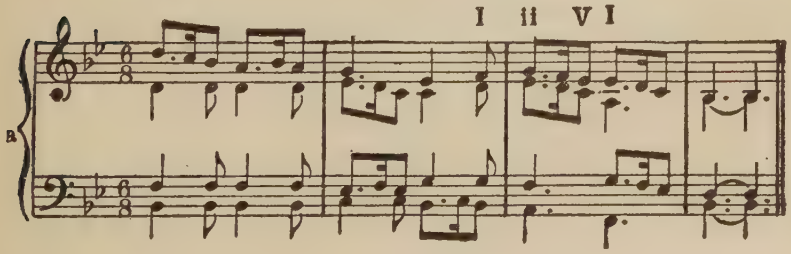
1. Sketch out a number of simple chord-schemes, and upon these compose cadence-groups in each of the following ways as illustrated:

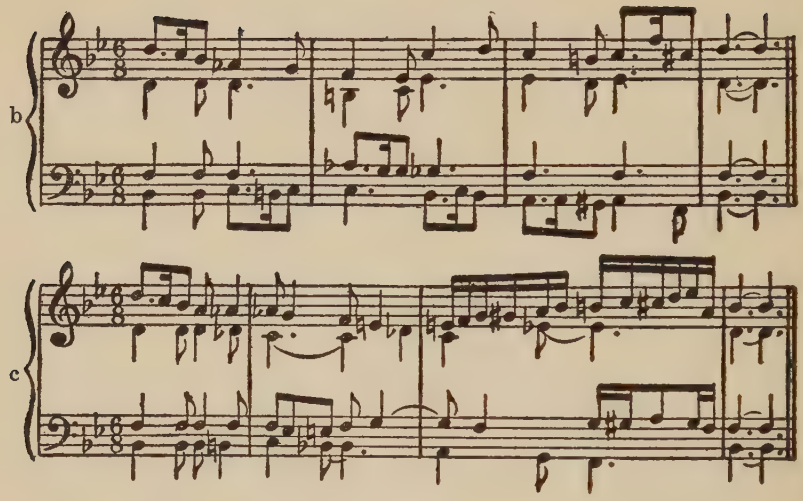
(*a*) Using only diatonic effects.

(*b*) Using color substitutes and chromatic tendency chords.

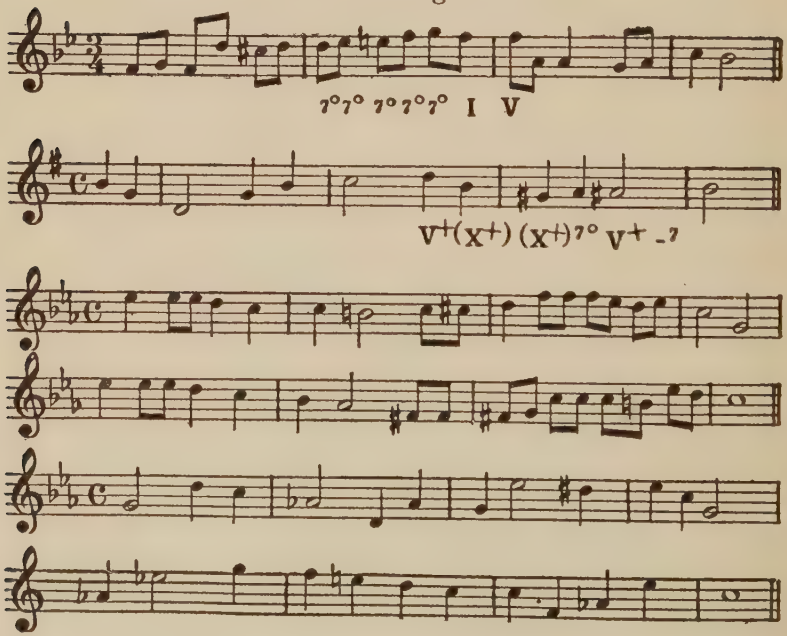
(*c*) Using chromatic modifications of chords and chromatic non-harmonic tones.

Example: Chord-Scheme:





2. Harmonize the following melodies:



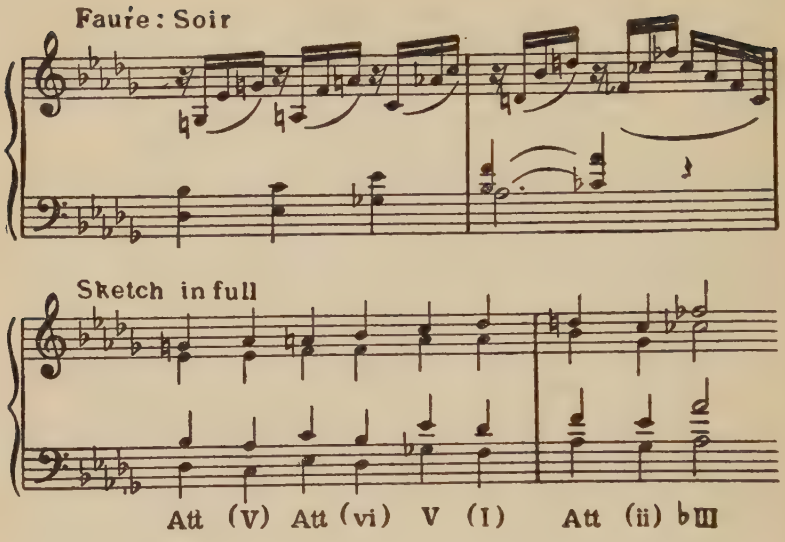
3. Compose cadence-groups in the tonal chromatic choosing for material whatever devices, presented in the previous lessons or the Elementary series, the student feels most in need of reviewing.

LESSON VI.

ELIPSIS AND FREE COLOR CHORDS.

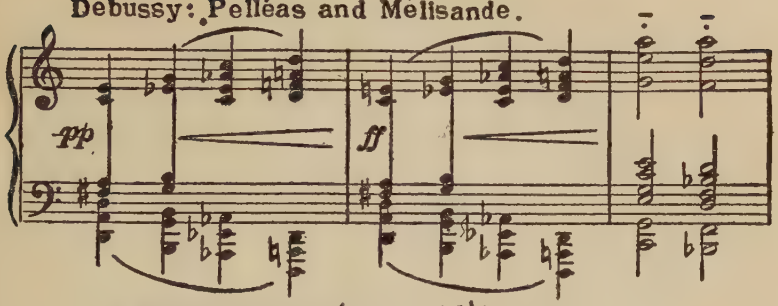
Reliance upon the power of that sensation of tendency which has been emphasized in Lesson V., brought into modern music one of its most characteristic features, namely, that of the musical elipsis. Elipsis in music means the omission of a harmonic moment which is well understood, for the sake of conciseness, or of piquancy. The understood moment must be, naturally, the moment of resolution of a tone or of a chord. Some of these musical elipses have long been in use, such as, for example, the resolution of a seventh chord directly to another seventh chord without the intervening triad. This is the most common case of musical elipsis. We have already called attention to two of the more unusual but well established forms of elipsis, namely, first, elipsis of the resolution of a tendency tone of a diatonic chord whose use is understood (page 320); second, elipsis of the resolution of a non-harmonic tone whose movement is equally inevitable (page 326).

The extension of the elipsis to an entire chord demands striking chords in striking positions, in which the tendency tones are prominent. It is connected almost inevitably with chromatic progression, and frequently, but not necessarily, with modulation:

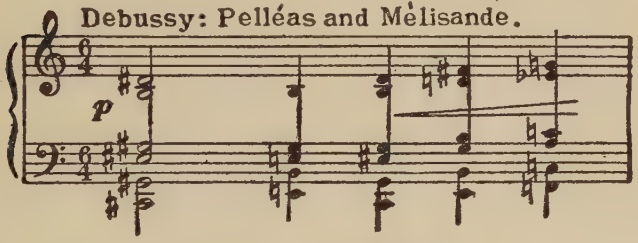


From the moment that musicians had come to accept such a short-hand of harmonic progression the path was open to the admission, ultimately, of certain chords for the sensuous beauty of their combination of tone, apart from the satisfaction to be gained by the proper resolution of the chord. A melody can be brushed in, to borrow the painters' language, with such chord tones as serve best to stimulate imagination. Naturally, in such cases it is quite as much the particular arrangement of the chords used which gives to them their beauty, as it is a question of consonance or of dissonance in the chord *per se*. Naturally, too, the chords chosen for this "brushing-in" process are primarily regarded simply as the penumbra of the melody note; and they often seem to lie outside of the key of the melody, being apparently so unrelated to each other that they gain their coherence from the fact that they are threaded on the same melody:

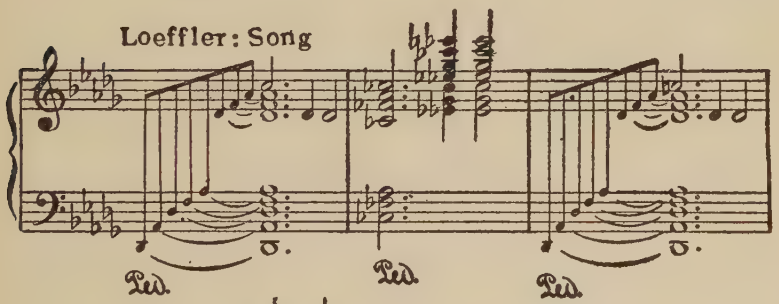
Debussy: Pelléas and Mélisande.

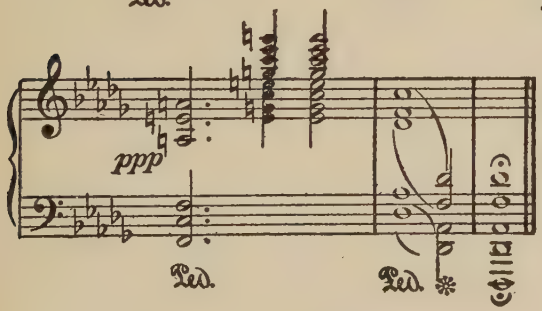


Debussy: Pelléas and Mélisande.



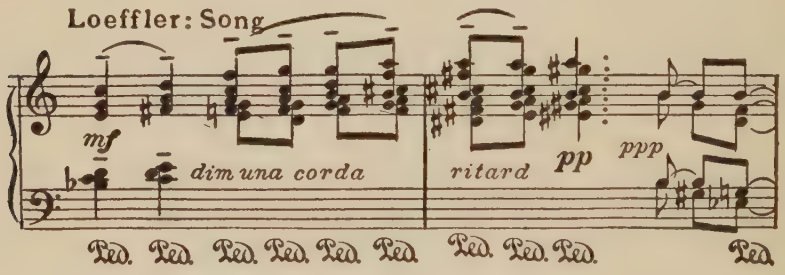
Loeffler: Song





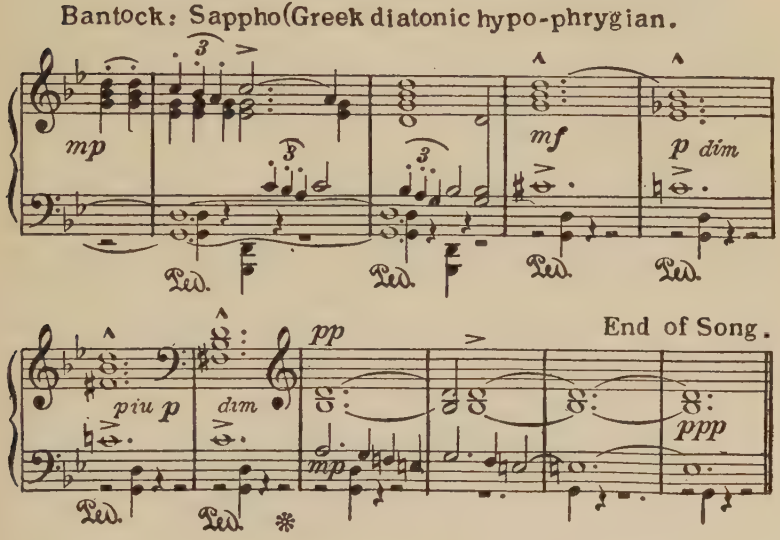
It is but one step further to find manifesting itself of late in compositions a peculiar sensitiveness to the chord impression as color, dissociated from melody. This appears in the shape of an inclination to interpolate between important chords others that seem either to be gathering up some faint impressions out of the harmonics of the previous chords or to be used as the contrasting background which serves to throw these former chords into high relief. (See example on page 337, Loeffler's Song.)

Again sometimes we meet with passages of delicate tone combination too complicated for the usual chord progressions; and although they admit possible analysis, as, for instance, as cases of chords sounded together with their neighboring-tones, it seems more true to the logic of events to reckon them as sensitive responses to the delight of color — plashes of sound, without the definiteness either of chord or of tone:



In connection with the manifestations of the color sense that have been discussed in the last two paragraphs there is nowadays an interesting inclination to seek for variety in scale effects. Many of the scale forms that were gradually abandoned in the music of the Seventeenth and Eighteenth Centuries because the scales were not good harmonic scales (see Elementary Harmony, Lesson VII), as to the limita-

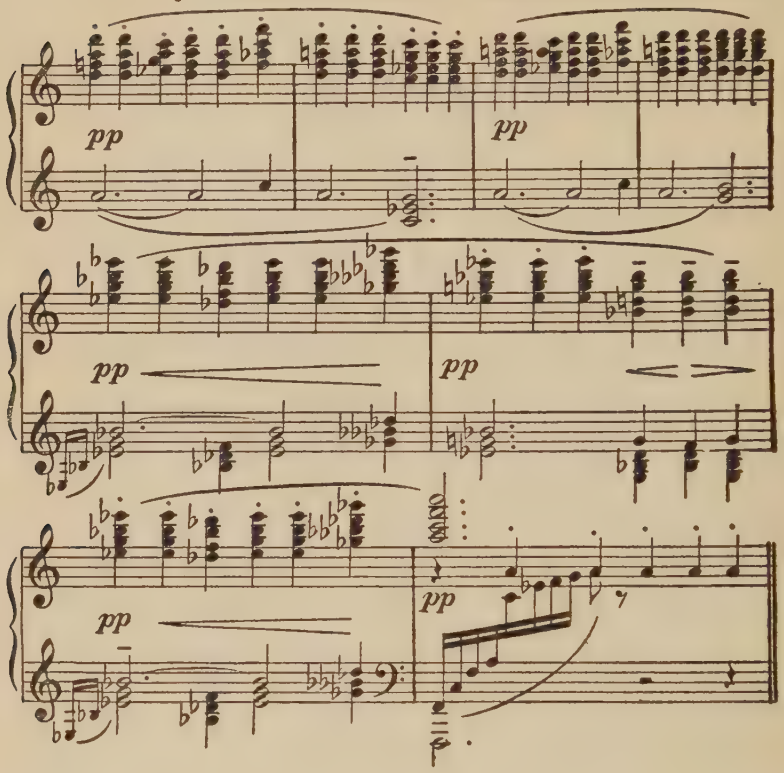
tions of even the modern minor, are being revived with chords drawn freely out of the tonal chromatic:



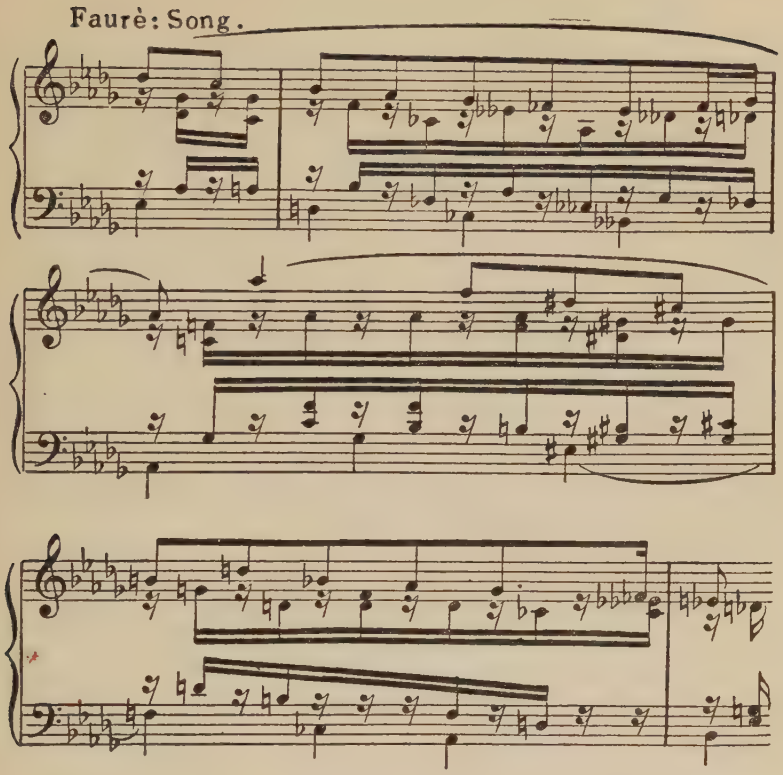
(See example from Debussy's Pelléas and Mélisande on page 340.)

New scale forms also are being adopted. The melodic scale which illustrates most vividly the advantage of the tonal chromatic in free treatment is that scale which completes its octave in a series of whole-steps: For example, the six notes C, D, E, ♯F, ♯G, ♯A. C. Out of the tones of this scale not a single consonant triad can be made; in fact, the only triad of the scale is the augmented triad. No actual seventh chord is to be found, and the only simulation, to the ear, of the seventh chord is that which seems like the dominant seventh with raised fifth, or its enharmonic. Although

Debussy: Pelleas & Mèlisande (Gregorian Modes as basis)



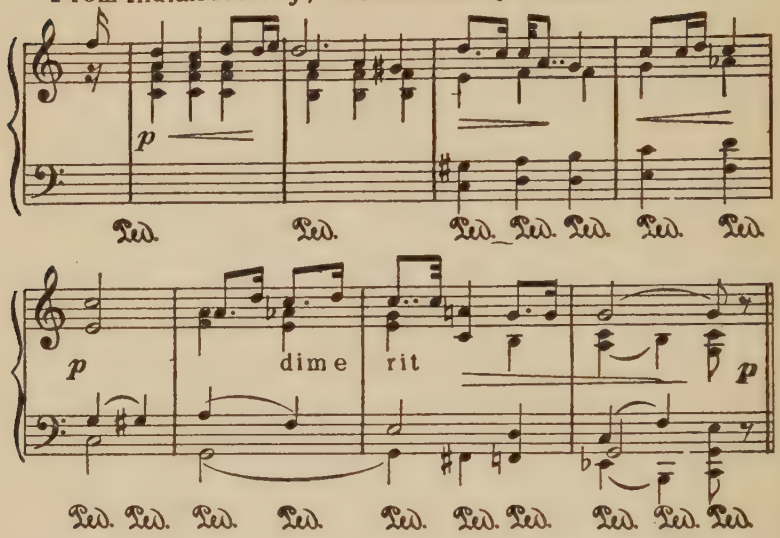
some composers have for the novelty of it attempted to use this scale as a harmonic scale it is manifest that the result must be music wholly unrestful, excessively monotonous. Used, however, as a melodic scale with harmonies drawn freely from the tonal chromatic many passages in Nineteenth and Twentieth Century music attest the effectiveness of this scale:



Such a use of melodic scales opens up to the composer the treasures of folk music, and of primitive music, without their peculiar limitations. It is, of course, a debatable question as to whether negro or Indian melodies, for example, afford sufficiently valuable or stimulating material to the composer to make their use a proper artistic cult; but there is no question that if so they must be cultivated in the warmth of the tonal chromatic. (See example, page 342).

The trend of this lesson would seem to point toward one still further freedom in harmonic treatment, which may be regarded as the legitimate conclusion in the manipulation of chords.

From Indian Melody, Harmonized by Arthur Farwell.



It is the *sine qua non* of all artistic expression that each moment shall be in understandable relationship to that which has gone before. In the use of chords musicians found the explanation, at the outset, most readily through the melodic line; the melodies dictated the chords; only such chords were permissible as grew within the progress of good melodies in the parts. Later on chords came to react upon melody, and various strange or awkward melodic skips found their justification in the effective progress of the chords with which they belonged, either as chord tones, or as non-harmonic adjuncts. When, as we see exemplified in this lesson, musicians have arrived at a recognition of the chord as a thing of beauty in itself, needing no explanation or justification, either from what precedes or what follows it, there seems to be a hint of a possible chord usage in which the chords may be entirely free from the bondage of melody.

The student must not mistake this, however, for a declaration that, to the master of harmony, melody is of no fur-

ther use. Just as rhythm finds its musical value intensified by expression through the melodic line, or by extension into chords, yet, in its turn, is restricted by the demands made by these very factors; so both melody and harmony inevitably must owe rhythm and each other deference so long as they are to be brought into musical unity. Still we know, on the other hand, that there are occasional examples to be found of a music in which for a few moments the entire interest is focused upon a single factor; as, for example, upon rhythm, in the famous kettledrum passage from the scherzo of the Beethoven Fifth Symphony; or melody, in the numberless examples of cadenza for voice or solo treatment. In that same way it would seem to be possible that the modern view of harmony shall afford a means of focusing attention with equal success upon harmony alone, where the interest is derived in no way from either rhythm or melody. Such a rare treatment needs a justification which only the very great composer is likely to find at his command.

For the student of music the logic of such a treatment is here presented, but the treatment itself is not commended.

Exercises in the Use of Elipsis and Free Color Chords.

The student may find it profitable to experiment somewhat in elliptical chord connections, and in free color effects; but it is hardly possible to set tasks. He is advised to analyze modern writings in order to understand the effects of which the newer writers are fond. The object of the analysis is not so much that they may serve as models for imitation as that the recognition of just what processes are used at any moment will add to his general mastery. The knowledge of many ways in which the material may be handled prevents the student from falling into ruts in his own composition; but a new rut is no better than an old one.

LESSON VII.

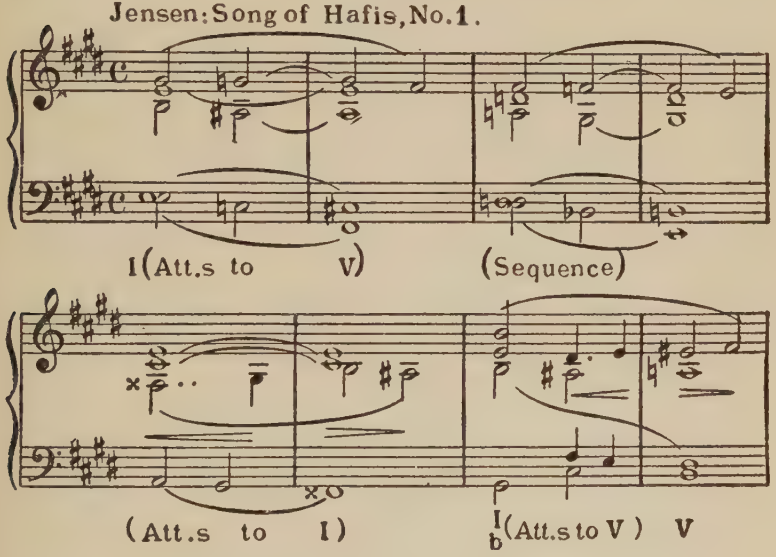
THE EXPANSION OF TONALITY AND MODULATION.

The first half of the Nineteenth Century saw a new emphasis placed upon rhythm. This marked a stage in the development of music in which the composer could be so thoroughly at home in the handling of rhythms that it would occasion no confusion of thought to introduce many irregular or unusual accentuations. The culmination of this new emphasis was when at the hands of Schumann and Brahms there appeared new types of musical beauty revealed in their masterly treatment of syncopation and especially of rhythmic syncopation.

Expansion of Tonality.

In a similar way mastery of the material of the tonal chromatic made it possible for the composer to toy with its resources. The subtlety of rhythm, which is the charm of syncopation, was matched by a corresponding subtlety of chord treatment. Thus, music may be found to gain through a wandering, hesitating use of chords in a key, or through a vague suggestive straying away from the tonal center toward possible other centers without actually reaching them. The means for accomplishing this is already at the student's command. He is advised, however, that just as syncopation gets its value only from reliance upon the persistent underlying pulse of the grammatical rhythm, so straying from the paths of tonal directness is an artistic gain, only while one it kept well aware of the substratum of key-impression. The student is also advised that such wandering has its esthetic significance, and may be far from good if it enters the music at the wrong moment.

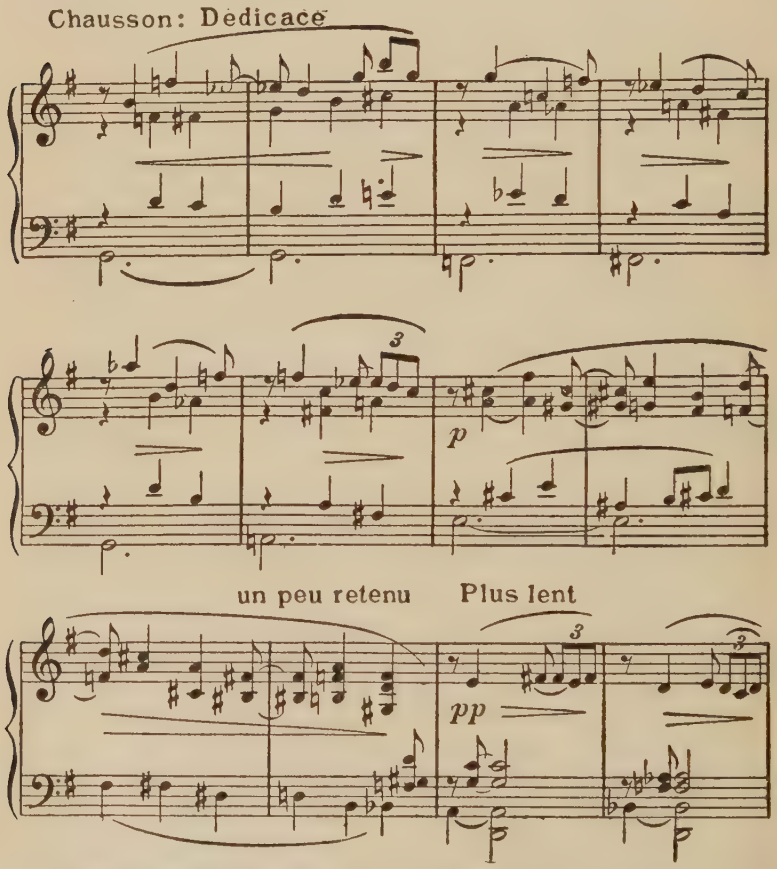
The following passage from the opening of a Jensen song accompaniment is effective, first, through the apparent suggestion of many possible modulations, by means of the enharmonic attendant chords with several possible resolutions each, and by means of the sequence figure; second, through the actual simplicity of the tonal scheme, which leads steadily toward the key center; and finally through the constant impression of unrest given by the super-abundance of dissonant chords, which puts the passage quite into the mood of the impassioned lover's rhapsody which follows:



INDETERMINATE MODULATION.

From the point of view of musical construction it is less important to realize how to lose the path of tonal directness and strength than it is to learn how and when to regain it effectively. The former comes under the head of INDETERMINATE modulation; that is to say, modulation in which one strays from a key without seeming to definitely acknowledge

allegiance to other keys. The rule for it is like the rule for a child's getting lost: move along from step to step without care as to the ultimate direction. The modulations from key to key are like those previously made by hinge-chord, but since there is no attempt to confirm the new key the effect is of wandering through the cumulative impression of several modulations:



Such a use of material is valuable in compositions of somewhat extended character in the portions known as devel-

opment sections, or in sketchy impressionistic pieces, like the illustration given, where the manifest aim is the production of a feeling that would answer to such wandering musical material. It is plain that a passage of this sort should terminate in the assertion of some definite tonality. For a piece to end in uncertainty of key is evident weakness.

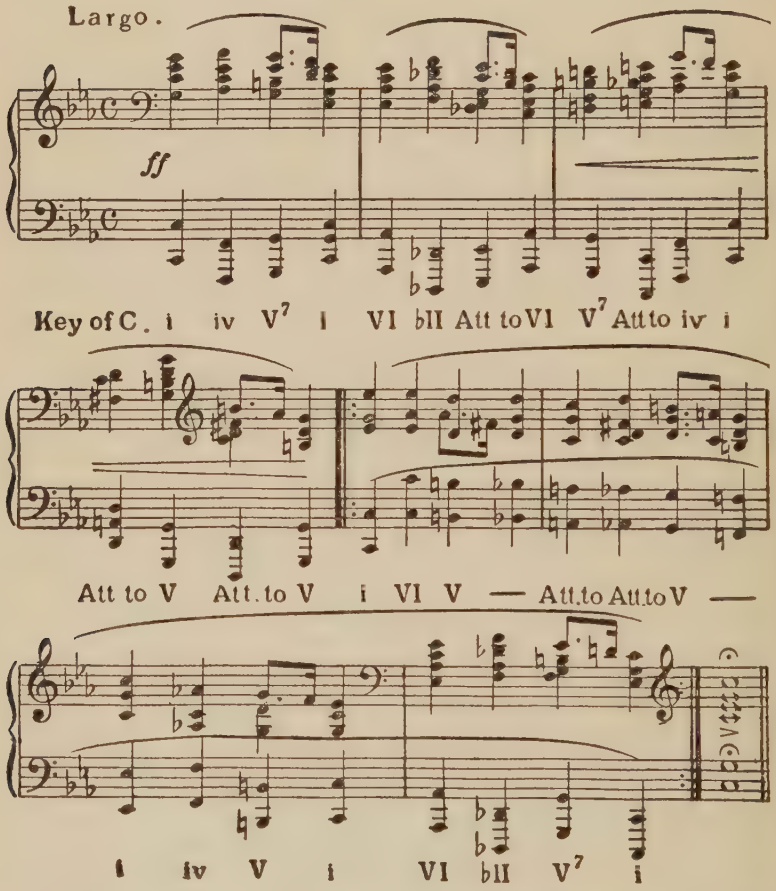
Transient Modulation.

Of similar character but more definite is what is known as TRANSIENT MODULATION, that is, modulation in which the key allegiance is always manifest but in which it is equally manifest that the new key chord is not a permanent tonal center. Two treatments of transient modulations are found: the first is that in which the modulations are but an expansion of the original key-scheme, and the ultimate goal is, therefore, the re-establishment of the starting key; the second is that in which the modulations lead through successive stations to a goal in a new and contrasting key center.

The former method of key expansion is readily accomplished by reliance upon attendant chords. Since most of the attendant chords stand related to their resolution triads in the way that the group of dominant tendency-chords do to a tonic it is easy to produce the impression of actual tonic by extending or interchanging various attendant chords until the moment of the cadence, and by then causing the cadence to consist of the actual resolution of the final attendant chord into the given triad. The music may then progress, in the next cadence-group, straight along in the original key; or even a series of attendant chord modulations into successive cadences may occur without actual loss of the original tonic center, provided the cadences themselves follow an order of chords suitable to the original key and that the last cadence-group is in the original key with a strong cadence upon the real tonic.

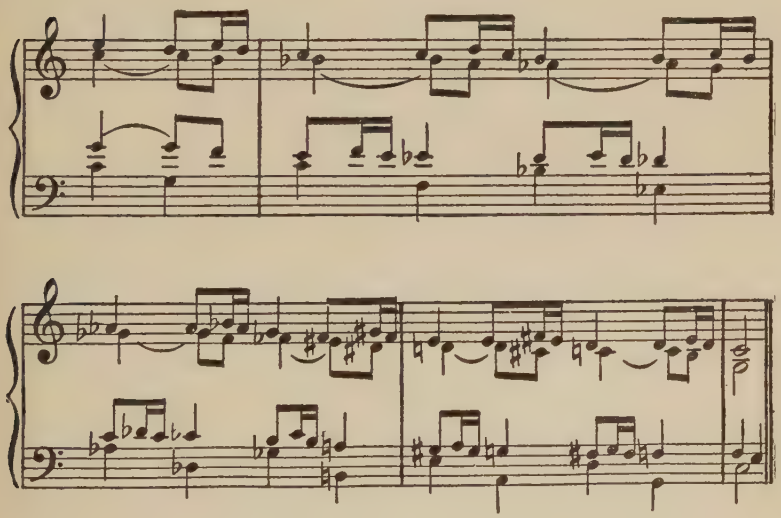
A good illustration of this within a few measures occurs in the Chopin Prelude in c minor given below. This can be

regarded as a case of modulation passing in four measures successively from c minor to ♭A major, to C major-minor, to G major and to c minor, where it remains during the rest of the piece. The feeling of modulation is well defined, and yet the piece may be analyzed as if it were in a single key from beginning to end:

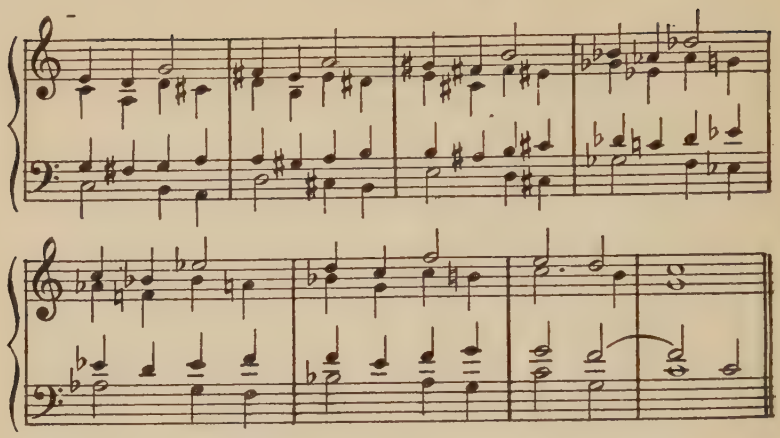


The other form of transient modulation is made in like manner through the use of attendant chords. It differs only

from that which was just described through the fact that the resolution triads of the attendant chords do not belong all of them in the same possible key. Attendant chords followed by their resolutions give so very definite an impression that we may, upon a series of quite unrelated triads, create a fleeting impression of a series of keys. Indeed, by the resolution of seventh chord directly to seventh chord in cadence progression, each successive possible tonic chord being made to appear as the dominant seventh attendant to the following chord, a series of modulations results which carries the music through the Circle of Fourths (see Elementary Theory, Lesson III.), C, F, ♭B, etc.:



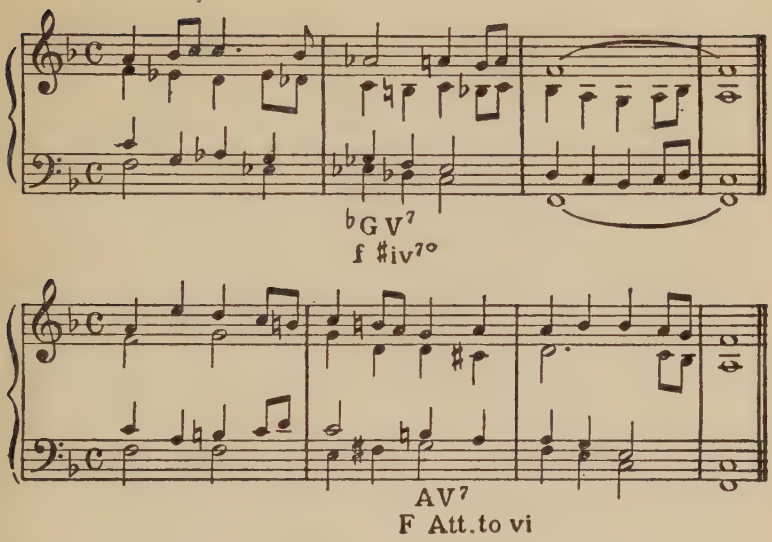
Or, by following each tonic chord with the attendant to its dominant, which is then to be successively regarded as tonic, the music swings on through the circle of fifths, C, G, D, etc. (See example on page 350.)



It should be pointed out that either series just given is valuable mainly in a sequence, but that as a means of modulation between remote keys it is far less important than most of the ways already familiar to the student. A portion of either series, however, used in an indeterminate modulation, can effectively help on the sensation of wandering which is desired, and at the conclusion a return by a suitable hinge-chord to the original key from such straying is often especially pleasant. (See example on opposite page.)

With the exception of those indeterminate and transient modulations which have for their object to weaken the hold upon a given key in order thereafter to assert and uphold another key, the purpose of all the modulatory material discussed in this lesson is to expand the limits of a given tonality, causing it to take on the aspect of a central key with various subordinate and dependent keys. As has already been suggested, the dependent keys are related to the central key in the way other chords of a given key are related to its tonic chord.

One thing further needs to be pointed out: namely, that the usefulness of a dependent key in this larger sense hangs not so much on the ease with which one reaches it as upon the naturalness with which one returns to the central key.



If the student will play over the transient modulation through the circle of fourths, and compare it with that through the circle of fifths, he will see that the former slips from key to key with very great ease, while the later conveys the impression of a definite exertion made in order to reach each successive new tonic. From this observation the student can see that while the modulation into a subordinate key may perfectly well be through either the circle of fourths or the circle of fifths, the return modulation through the circle of fourths is decidedly preferable. Hence it comes about that modulation to the dominant key is more valuable than modulation to the subdominant key; since the return modulation from the dominant key is by the circle of fourths. Incidentally, the student should notice that the pitch of keys in the circle of fifths seems to be successively higher, while the pitch of keys in the circle of fourths seems to be successively lower. This is, of course, a mere matter of impression, and

not of fact; the key of F may just as truly be said to be above the key of C, as may the key of G. Each circle is, in fact, when taken in reverse order, interchangeable with the other. But the resolution of a dominant seventh chord to its tonic does give the plain impression of a movement downward.

Aside from the value given to a dependent key through the closeness of its connection with the original key (that is, the ease of the return modulation), the value of the movement *into a dependent key* is to some extent due to the contrasting tone region of the new key. There is a feeling of definite increase in brightness due to the change of music to a higher tonal region, and a corresponding sense of quietness and repose due to the change into a lower region. For the purpose of exploiting that particular sensation of the increase in the brightness of the key, or its contrary, a modulation should be made with considerable directness. It is not the purpose of this lesson to discuss the question of just when this more definite sense of rise or fall in the music is especially valuable, but merely to put this thought into the mind of the student.

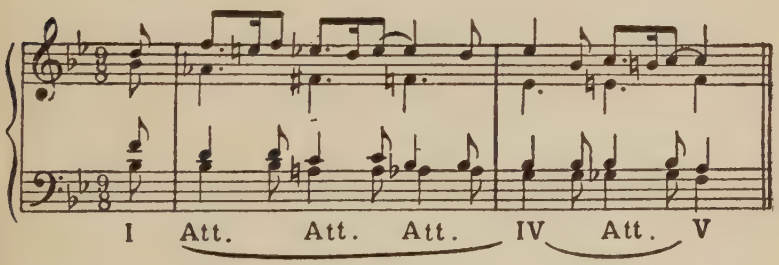
Historically it is of interest to observe that the modulations in music have followed very closely upon the order of keys which corresponds to the simplest relationships of chords in a key. Thus, the larger proportion of Seventeenth and Eighteenth Century music was content with modulation out of the tonic key into that of the dominant and return; or from a tonic minor key to its mediant (relative) major and return; or from a tonic major to its submediant (relative) minor and return. In the former cases this secures for the new key a sense of heightened interest, and for the return modulation a sense of repose. In the latter case this affords in the modulation to the new key a sense of let-down in mood due both to the lowering of the keynote, and to the change from major to minor mode, while the return modulation restores the vigor of the beginning key. Nineteenth Cen-

tury music still regards these as the more important modulations, but has added others according to other simple relationships of the tonic triads, as suggested.

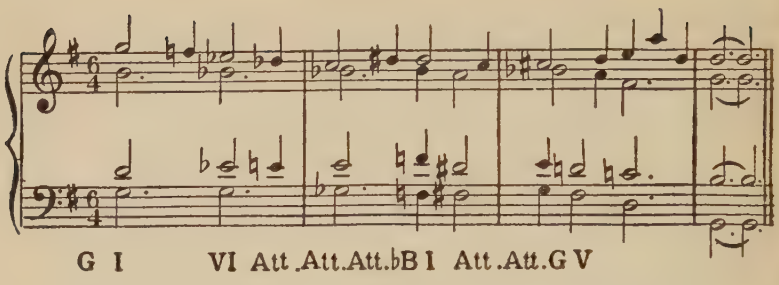
Inasmuch as the material of the tonal chromatic permits with perfect ease a modulation out of any key into any other, it is not surprising to find that there is a gradual disposal on the part of composers to experiment with other keys, in their attempt to create contrast of tone region. As has been said in regard to the unusual manipulation of chords here, also, in regard to unusual modulation, it should be added that the logic of such a treatment is presented to the student of music, but the treatment itself is not commended.

Exercises in the Expansion of Tonality.

1. Compose cadence-groups in which movement shall be made from the tonic to the subdominant chord, and then to the dominant chord, with interpolation of various attendant chords of each. For example:



2. Compose cadence-groups in which indeterminate modulation is brought about by entering various keys, and not tarrying long enough to make even cadence-resolutions therein. For example:



3. Compose periods of two cadence-groups, each containing transient modulations in expansion of the original key.

4. Compose periods of two cadence-groups, each containing transient modulations ending in a contrasting key.

It is at this point in his work that the student should take time to get a thorough grip upon the subject of modulation. He should write many exercises in modulation from any key to any other, either directly by some form of common material or by transient modulation through several keys. This should be done not only out of the key of C into others but from keys in which difficulties of enharmonic writing occur; e. g., from B to ♭E, or from ♭D to A, from ♯F to ♭b, or ♭e to B.

LESSON VIII.

FIGURED BASSES.

As a convenience in notating music it was formerly often the custom of musicians who understood the laws of chord connection to write out only the lowest note — that is to say, the bass note — of a series of chords, and to indicate the remaining notes of the chords by figures which stated the intervals of the upper notes with this bass. If together with the important upper melody, such a figured bass also

was written, the figuring saved the practical musician considerable work, since he knew how to fill in other parts by the laws of chord connection. This mode of notation has very largely gone out of us except as an aid in the study of harmony.

The meaning of the figures is readily seen. Thus, for example, the bass note G with the figures $\begin{matrix}7\\4\\2\end{matrix}$ above or below it, require with the G, an *a,* a *c,* and an *f;* or the figures $\begin{matrix}6\\5\\3\end{matrix}$ above the G call for a *b,* a *d,* and an *e;* or the figures $\begin{matrix}\sharp 7\\5\\\flat 4\\2\end{matrix}$ call for an $^{\flat}a$, *c, d,* and an $^{\sharp}f$.

The value of the figured bass system depends upon quick recognition from the figures given of the different chords. Facility in doing this is easily acquired.

The complete figuring of all chords is not necessary; indeed, many of the chords are in such common use that an abbreviation of their figuring can be employed. In the modern use of figured basses nearly every figuring is abbreviated. The names which are given to the different chords according to their figuring have still been retained by modern musicians. A table which shows the most frequently used of these chords is inserted on page 356 for the convenience of the student.

It is to be noticed that each inversion of a chord requires a different notation, hence the system of figured basses does not reveal either the chord as a whole, or its place in the key. If the student, however, is perfectly familiar with the place of a chord and the use of it in a key he may find a figured bass convenient; for the short-hand of figured bass is written more easily than that of the Roman numerals, and in the case of modulation, especially transient and indeter-

TABLE

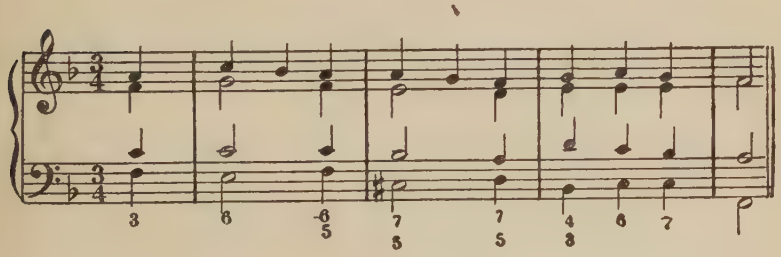
CHORD-NAME.	FIGURING OF BASS. FULL.	FIGURING OF BASS. ABBREVIATED.	DESCRIPTION.
Triad	8 5 3	(Usually not figured.)	Triad in fundamental position.
Chord of the Seventh	7 5 3	7	Seventh-chord in fundamental position.
" " " Ninth	9 7 5 3	9	Ninth-chord in fundamental position.
" " " Sixth	8 6 3	6	First inversion of a triad.
Chord of the Fourth and Sixth (Six-four chord)	8 6 4	6 4	Second inversion of a triad.
Chord of the Fifth and Sixth (Six-five-chord)	6 5 3	6 5	First inversion of a seventh-chord.
Chord of the Third, Fourth and Sixth (Six-four-three chord)	6 4 3	4 3	Second inversion of a seventh-chord.
Chord of the Second	6 4 2	2	Third inversion of a seventh-chord.
Chord of the Augmented Sixth, or the Italian Sixth	8 ♯6 3	6+	
The French Sixth	♯ 4 3	6+ 4 3	
The German Sixth	♯ 5 3	6+ 5	
The Neapolitan Sixth	8 (♭)6 3	N. 6	
Chord of the Fourth and Fifth	8 5 4	5 4	Triad in fundamental position, with suspended third.
Chord of the Second and Fifth	5 2	5 2	Triad with suspended third, suspension in bass.
Chord of the Sixth and Seventh	7 6 3	7 6	Seventh-chord, fundamental position, fifth suspended.
Chord of the Second, Fourth, and Seventh	7 4 2	7 4 2	Seventh-chord, third inversion, fifth suspended
Etc., etc.			

minate modulation, it may be the only indication of chord-scheme necessary. The compiler of these lessons, while not especially advocating the use of figured basses, regards it as on the whole an advantage to the student to understand the system.

The following rules will be sufficient to make plain the method of writing a figured bass:

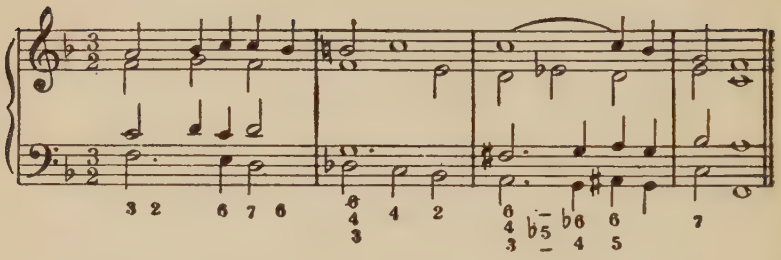
Rule 1.—In determining the actual notes to be inserted above the bass, in accordance with the figures, the order in which the figures are written is not to be regarded; that is to say, the upper figure of the group is not necessarily the upper note in the chord. The exception to this rule is in the case of the first chord. Here the upper figure, usually the only figure, does indicate the highest note. After the first chord the highest as well as all the others is determined by the rules of good chord connection.

For example:



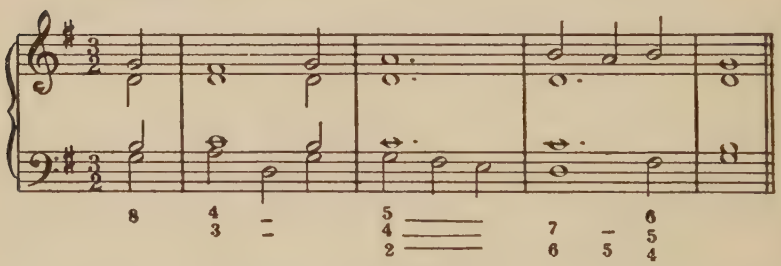
Rule 2.— If above a single bass note there are two sets of figures, calling, thus, for two chords, each chord is supposed to occupy half the time of the bass note, unless this bass note occupies an uneven rhythmic portion of a measure. In the latter case one chord will fill the even divisions, the other will occupy the remaining time.

For example:



Rule 3.— When the notes which have been called for by the figures over a given bass note are to be retained over a different bass note, instead of figures a series of dashes may be placed over the second bass note.

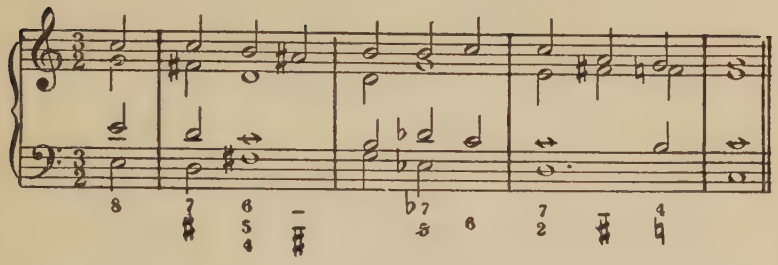
For example:



Rule 4.— Instead of writing a sharp or natural to indicate a tone which is chromatically above the scale note, it is customary to draw a line through the figure which would be used for the scale note, i. e., $\not{8} = {}^{\sharp}6$, or $\not{4} = {}^{\natural}4$, if the scale note was $^{\flat}$.

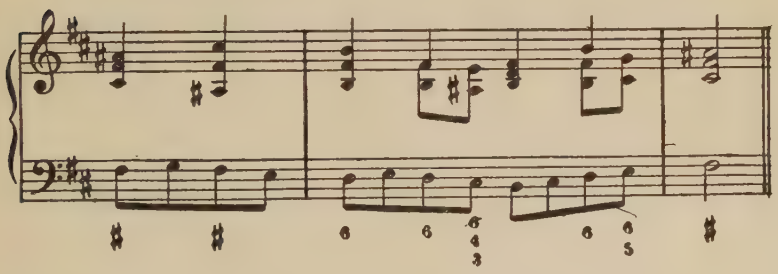
Rule 5.— If the chromatic note is the third above the bass the chromatic sign for it is usually used alone without a figure; that is to say, $^{\sharp}$, $^{\flat}$ or $^{\natural}$ alone, or with other figures above or below the sign, always means $^{\sharp}3$, $^{\flat}3$ or $^{\natural}3$.

For example:



Rule 6.— If a bass part makes use of non-harmonic tones, only the chord notes require the figures, unless the result would cause confusion. In modern figuring non-harmonic tones usually indicate by dashes the continuation of the previous chord.

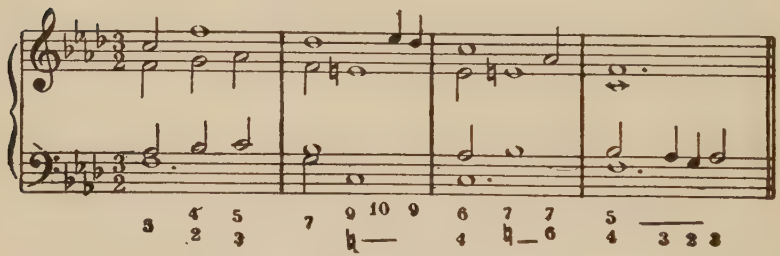
For example:



In some of the very early figured basses we find the actual intervals indicated above the bass note even though the figures were an 11, 12, 15, or 17. That method was soon abandoned and only the tones that are felt to make up an actual chord or neighboring-tone to the chord occur; thus the figure 9 is constantly to be found, but the figure 10 would mean the same as the figure 3, hence it is not used, unless by a very rare combination it becomes the neighboring

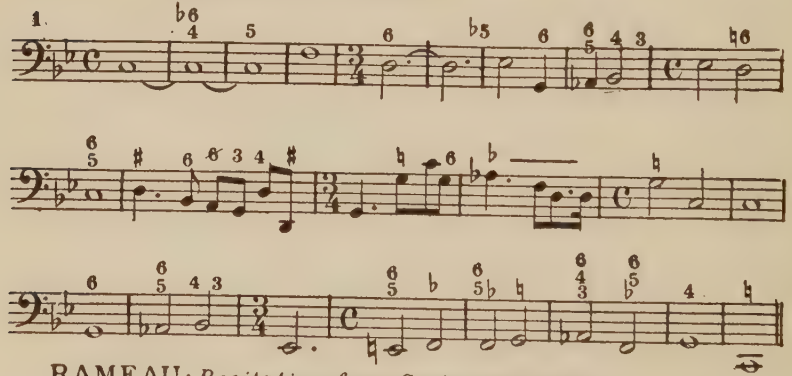
tone above the ninth of a chord. Any larger figure than 10 is replaced by its equivalent within the octave:

For example:

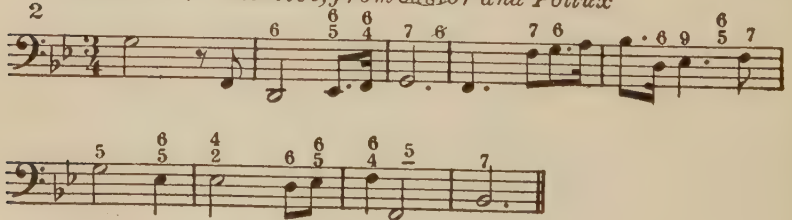


Exercises in the Use of Figured Basses.

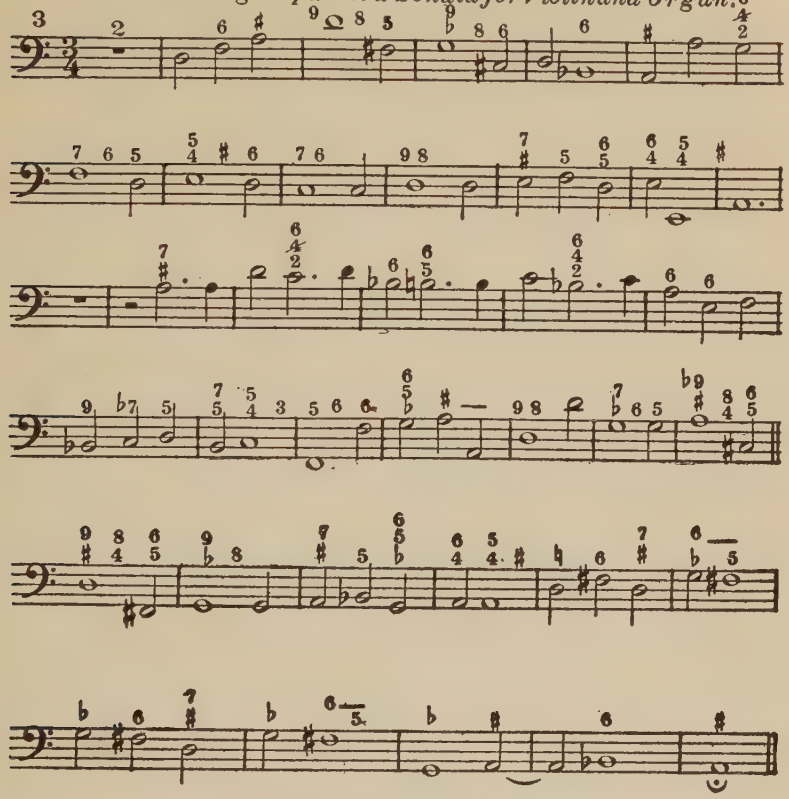
LULLY: *Recitative, from Armide*



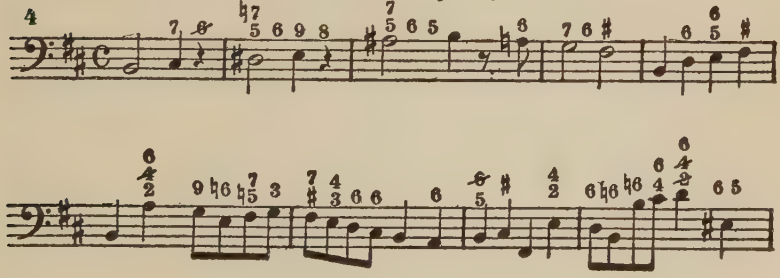
RAMEAU: *Recitative, from Castor and Pollux*



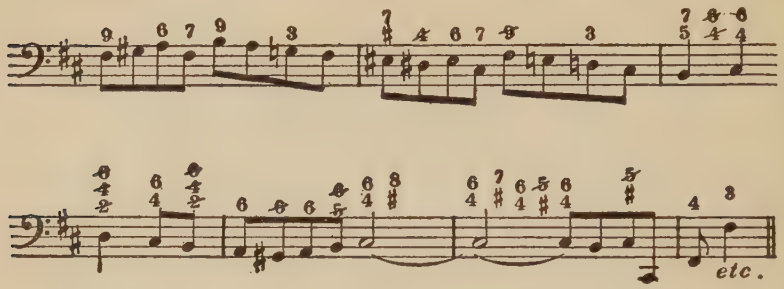
CORELLI: *Organ-part to a Sonata for Violin and Organ.*



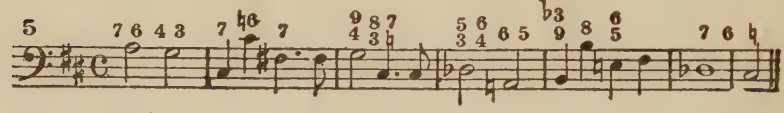
BACH: *Basso Continuo to Kyrie of B Minor Mass.*



Bach: *Basso Continuo to Kyrie of B Minor Mass.*

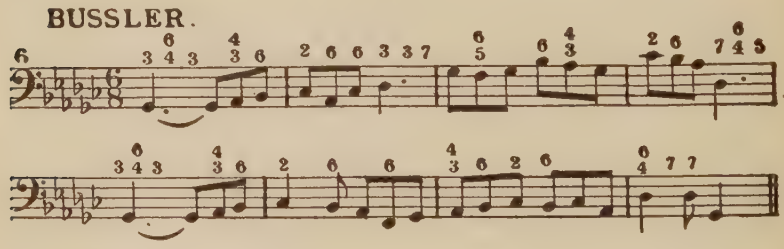


Handel: *Original figured bass, from No. 24,* Messiah.

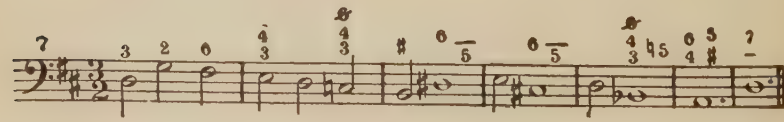


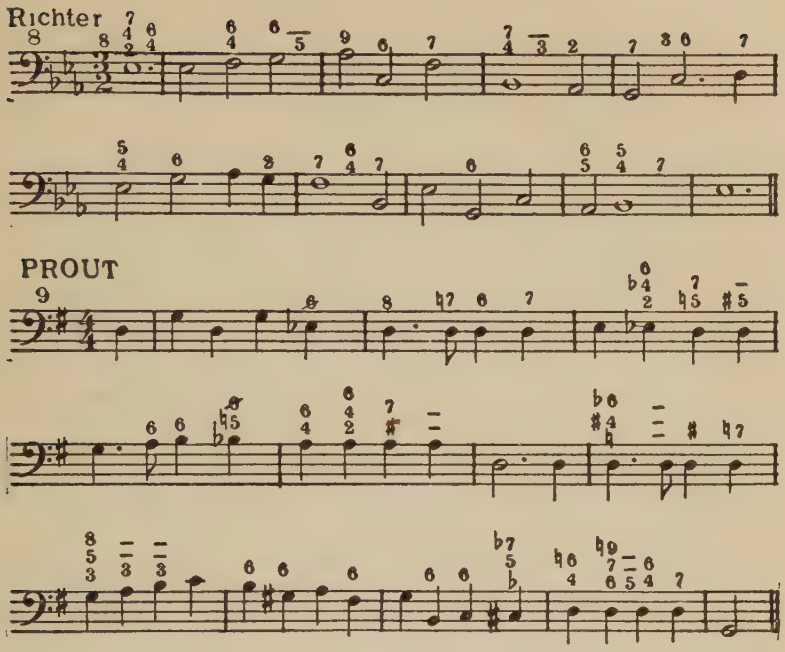
[Note.— Examples of figured basses could be multiplied from the works of this period and earlier. Modern figured basses are scarcely to be found outside of text-books, from which, therefore, the following, to illustrate more modern usages, are taken.]

BUSSLER.



Jadassohn.





LESSON IX.

THE SMALLER ONE-PERIOD FORM: THE CHANT.

It has been the purpose of these lessons to encourage the student from the outset in thinking of his exercises as true musical compositions. Nevertheless, since the immediate object has always been to obtain a mastery of some specific effect of harmony, the results have inevitably appeared somewhat one-sided: in one exercise nothing but diatonic chords; in another a superabundance of chromatic effects; still again an overlay of superfluous non-harmonic tones. The true

composition springs from quite another impulse, that of the expression of an esthetic purpose, and it chooses its harmonic material in accordance with its purpose.

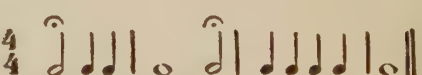
Again as an aid in the treatment of chords the exercises have always been constructed in four-part writing. While the composition in four independent parts, and within the range of the voices of a mixed quartet, is the most important way of treating musical material even for instruments, still the composer is frequently led by his purpose to write in fewer or in more parts, to exceed the limits of voices, or to employ methods that are purely instrumental in the handling of his material. The study of most of these questions belongs properly to elementary composition. It would, however, be leaving the subject of harmony proper incomplete not to apply its principles to at least a few of the simpler tasks of the composer, such as to the writing of chants, of hymn tunes, and of short part-songs.

The shortest complete composition in music needs consist of but a single cadence-group. Such brief musical expressions are found in the Gloria Tibi and in the Single Anglican Chant.

Chants.

The single chant consists of a reciting note followed by three chords which form an incomplete cadence; then a second reciting note followed by five chords which form a complete cadence. It is generally notated in the following manner:

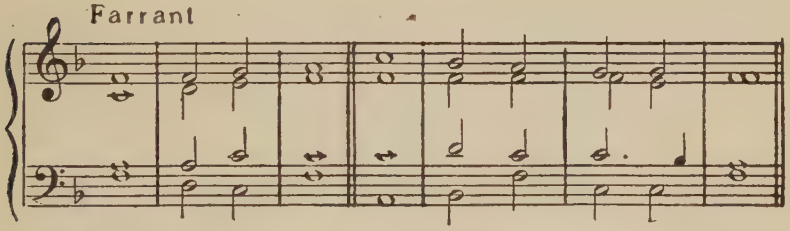
But it might be written in this way:



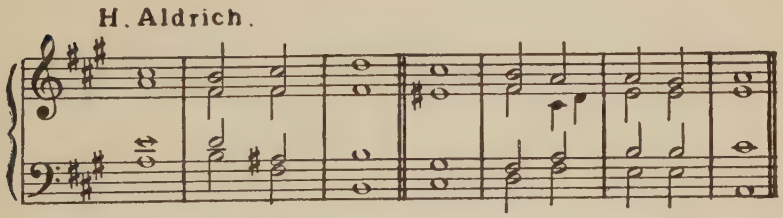
which reveals the rhythmic form more clearly than does the established form.

Since the reciting notes are frequently many times repeated, it is essential in a chant that they are pitched well

within the compass of the singer's voice; and again, from the fact that the following chords serve as a completion to the phrase, it is desirable that the cadences should come with the effect of climax. On the other hand, the small number of chords allowed to each phrase, the demand for two cadences, and the dignity of the chant as a part of the Anglican service, all point to great simplicity. Historically, too, the derivation of the Anglican chant from the Gregorian psalm, dictates certain forms of melody that makes this simplicity quite inevitable:

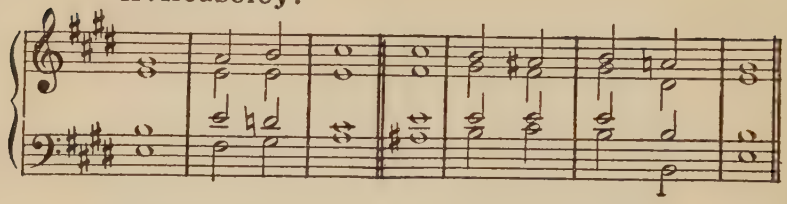


Still, even within this short composition, modulation is possible, though not at all necessary:

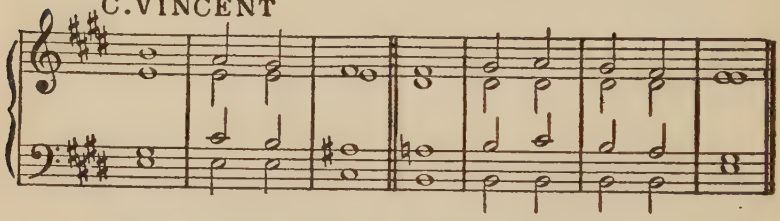


There has been of late years a tendency to introduce into the single chant occasional chromatic chords or chromatic melody; also to omit the cadence formula from the first group, and to close the second group with less strong forms of the cadence:

H. Houseley.

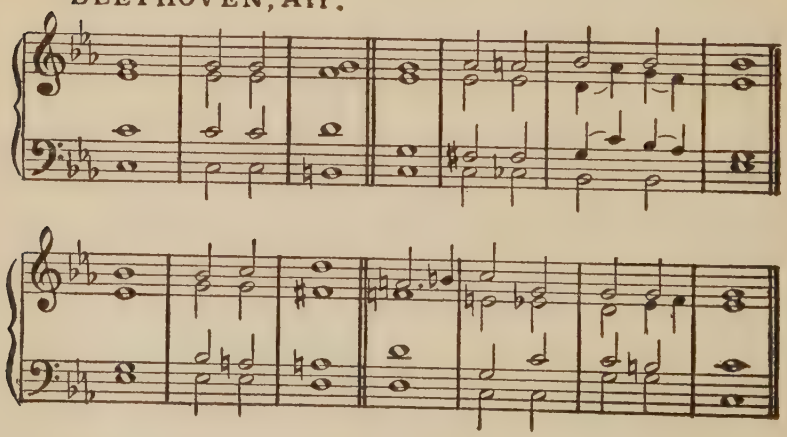


C. VINCENT

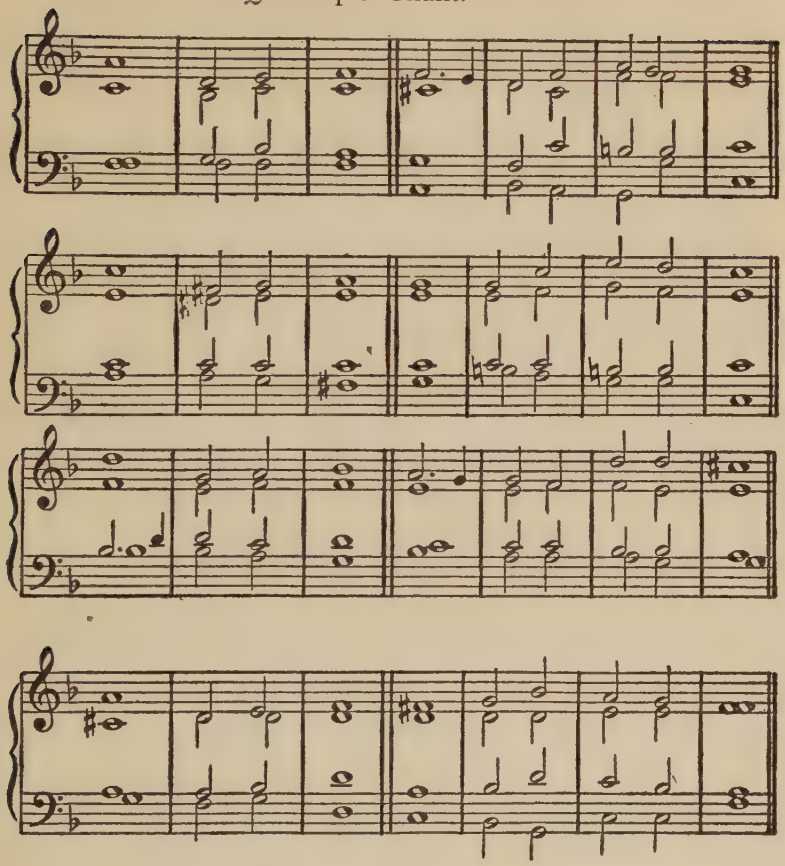


The tendency noted above is found still more freely in use in the double chant, or in the triple chant or the quadruple chant, which are sometimes found in modern service books. In these more extended chant-formulas modulation is to be expected, and the construction of the chant has much of the freedom of the modern English hymn tune:

BEETHOVEN, Arr.

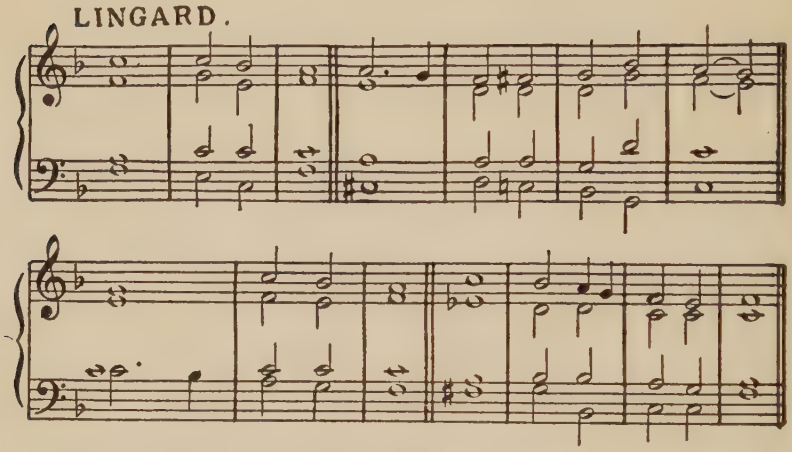


C. R. Gale: Quadruple Chant.

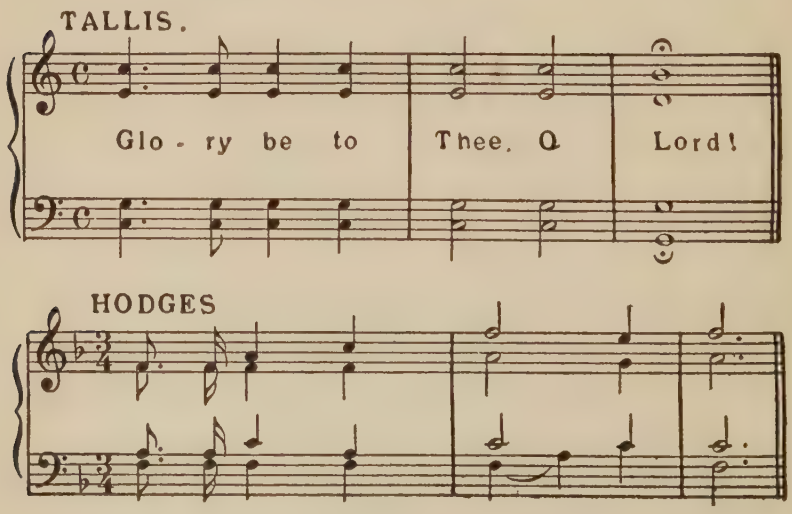


The double chant is on the whole the most popular form of English chant. In chanting a long psalm it is well-nigh necessary, and even in the shorter canticles it is felt as a relief, to use the double chant rather than to repeat the music of a single chant with every verse. When adapting to a double chant a psalm that has an odd number of verses, the second half of the chant must be repeated. For this purpose it is important that the last half of the double chant

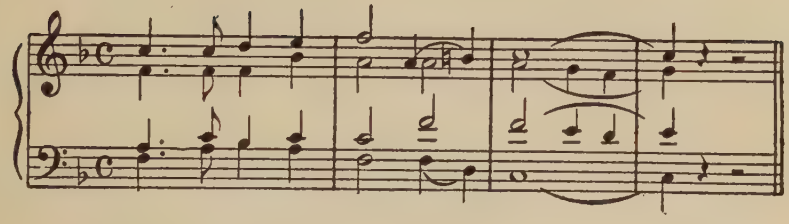
should begin with a chord that, both as to order and arrangement, can follow properly the final cadence chord:



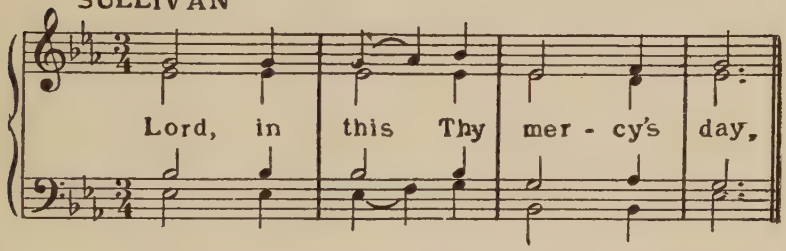
The Gloria Tibi, in its simplest setting, is but a cadence-formula with three accents; in its more common treatment it is a complete cadence-group:

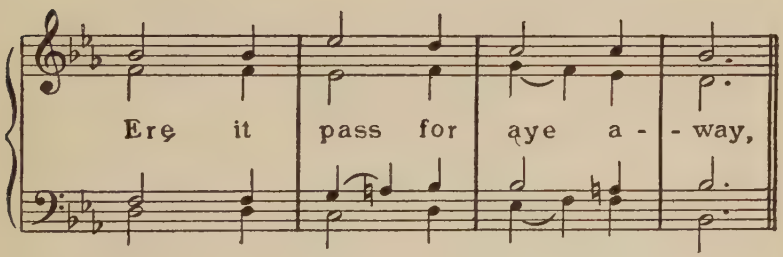


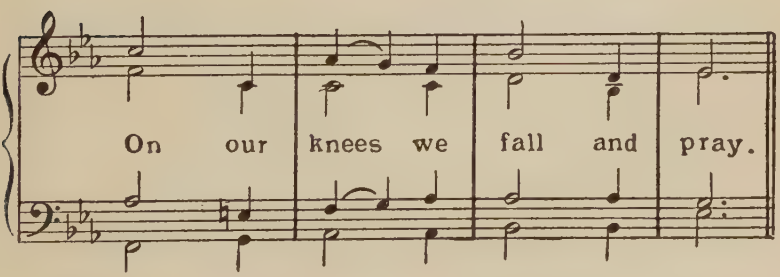
King.



SULLIVAN







The chant, then, is a one, two (or, rarely, three or four) cadence-group period constructed for a special purpose. It is somewhat rare to find independent single pieces of any other kind that are as short; although the period made from two cadence-groups is not infrequently found as a portion of a larger form. The example of a hymn-tune from Sullivan, on page 369, with but three cadence-groups is altogether exceptional; as is the poetic form of which it is the setting.

Exercises in the Writing of Chants.

1. Write single and double chants, both without and with modulation.

2. Write triple and quadruple chants, ending the second group in the key of the dominant.

3. Make settings of the Gloria Tibi in cadence-group, both with three-measure and with four-measure rhythm, and both with cadence to the dominant and with cadence to the tonic chord.

LESSON X.

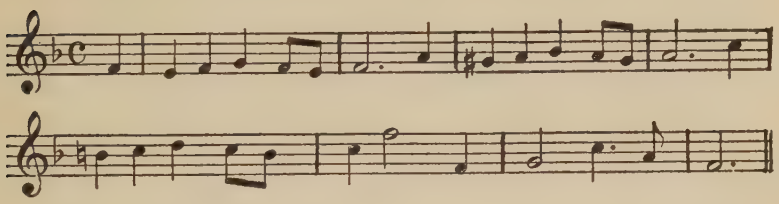
THE LARGER ONE-PERIOD FORM.

The constitution of a musical period, as already presented in the chant, and in the two and three cadence-group form, is much less important that the period having four cadence-groups. This might almost be called the normal period form. It is that which is found in the usual four-line hymn-tune. In a piece of this character much opportunity arises for variety of treatment, and corresponding stress needs to be laid upon the means which may be taken to produce the effect of unity and completeness in the period; namely, first, by the treatment of the melody; second, by the treatment of the rhythm; third, by the treatment of the tonalities; fourth, by the treatment of the cadence.

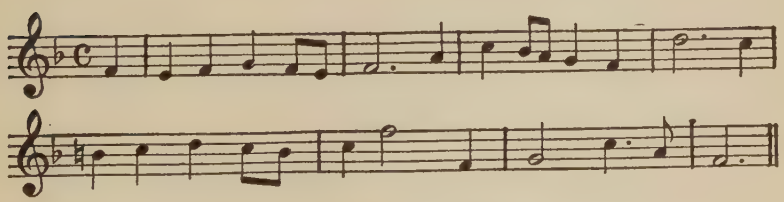
Melody in the Four-cadence Period.

In this type of period there is admirable opportunity for producing effects of climaxes, contrast and proportion, through suitable modifications in the melody.

Climax is usually brought about by increase in intensity up to the last line, the third line more frequently than not containing the highest note of the piece, after which in the last line a sense of repose and finality is made to assert itself. This effect of intensity is sometimes added to by causing the melodies of the three successive lines to be in imitation, thus giving a complete contrast to the last line:

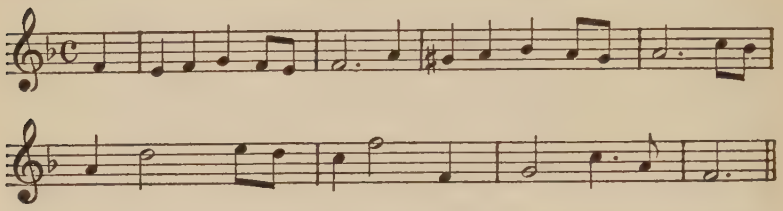


Yet, this method of gaining climax, even if the imitation be quite free, is usually open to the objection of monotony. It is felt, too, to lack proportion, and it leaves all contrast, as has been said, to the last line; hence, more frequently we meet with imitation in the first and third lines:

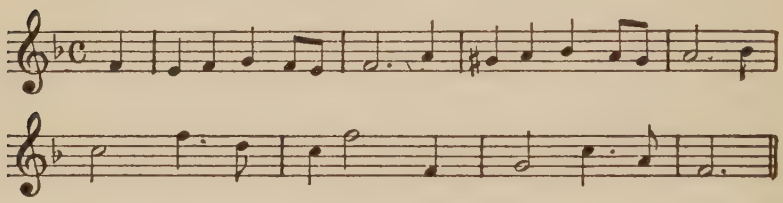


Or again, the imitation found in the first half of the piece is put in contrast with the entire second half. In this

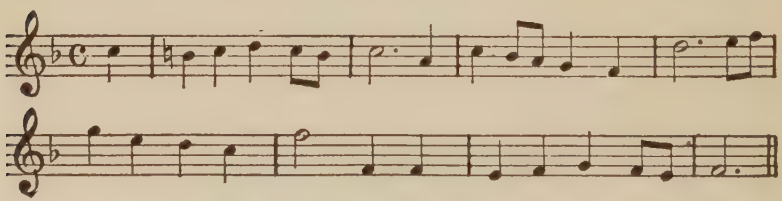
case often the third line is given an additional feeling of climax by containing a shorter imitation figure of its own:



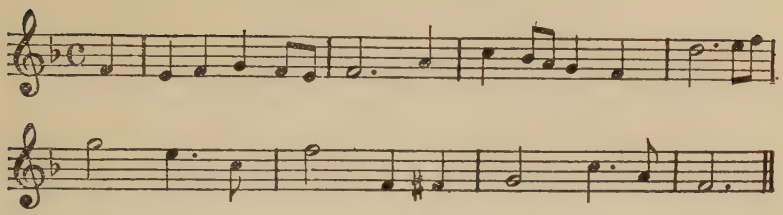
Or the second half is made to balance the first by having its corresponding two lines of imitation:



Less often than the other methods the imitation is reserved until the last line. Here reliance has to be put upon other means for gaining climax, but the imitation serves to secure unity:

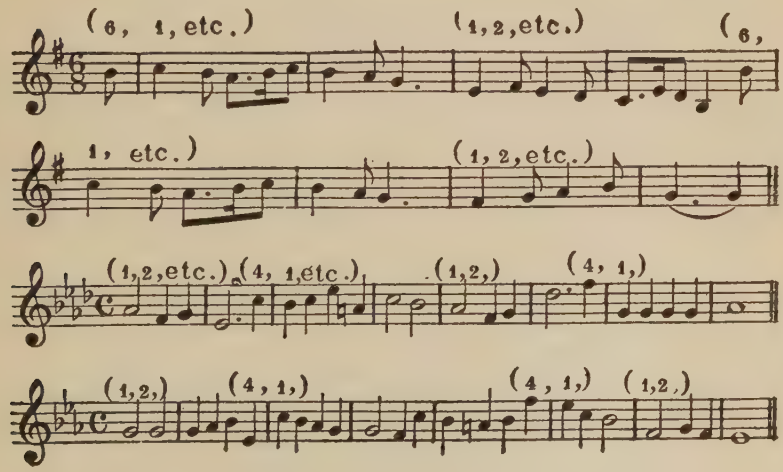


Finally, sometimes climaxes are obtained without any melodic imitation whatsoever. In this case, although the element of contrast is uppermost in mind, that of proportion can readily be secured, also, through pairing off the lines by giving a general similarity to the first two lines, and a contrasting similarity to the last two lines:



RHYTHM IN THE FOUR-CADENCE PERIOD.

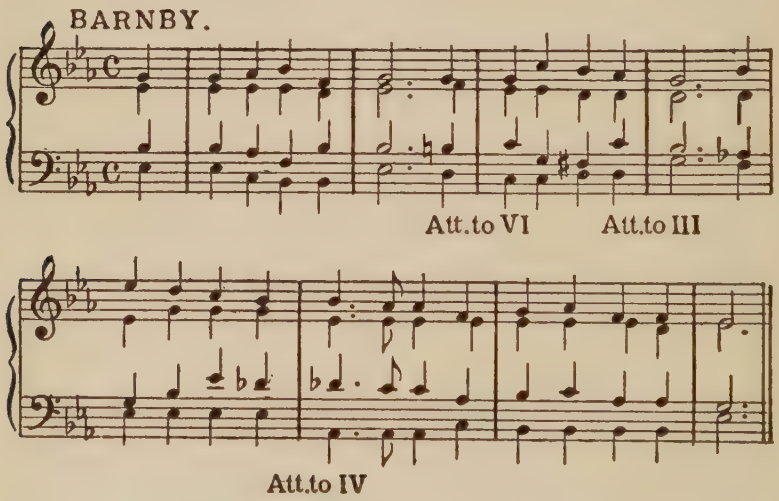
The subject of rhythm in vocal music will be discussed more fully in the following lesson. As bearing upon the unity and completeness of a one-period form the following observation may be made: In so small a form as this it is extremely rare to find the time changed. The accent-type which is chosen at the beginning continues throughout the music. Not infrequently, however, the group-form which is chosen at the beginning is changed for another. This is more apt to occur in cases where the first group-form starts upon an accent:



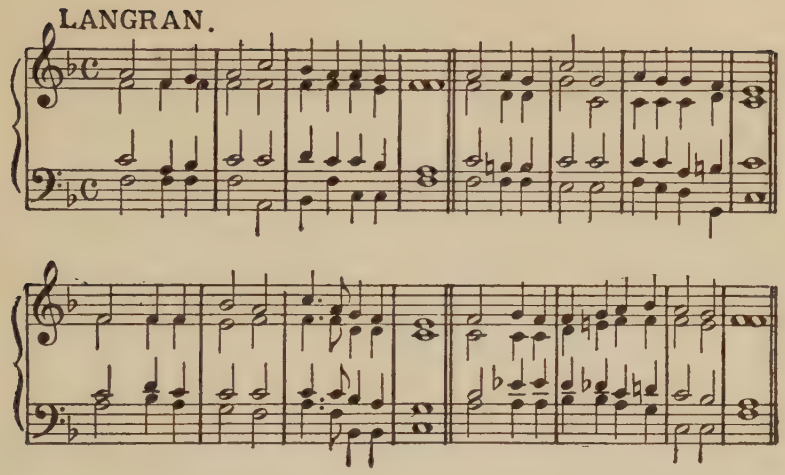
It is to be noticed from the illustrations just given that the interchange of group-form assists in gaining proportion and contrast in the piece, even in the cases where there is no melodic imitation.

Tonality in the Four-cadence Period.

In so small a form as this modulation need not necessarily occur. Still it is more apt to happen, but is almost invariably into keys that stand in close relationship; that is, that afford a ready return to the original key. Indeed, with the tonal chromatic to choose from, much of the modulation becomes a mere emphasis, through a cadence with attendant chords, upon the triads of the original key:



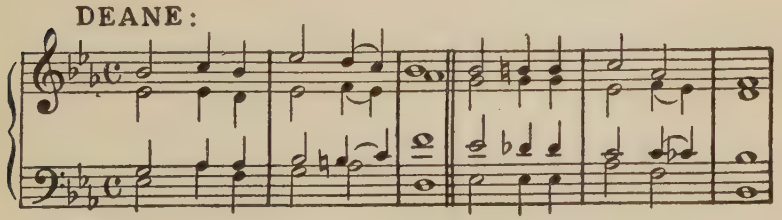
In the rarer instances in which a contrasted key is reached and firmly held, this key is usually that of the dominant, and the return modulation is frequently made emphatic by the use of attendant chords to the subdominant triad of the original key, which helps to restore its balance:



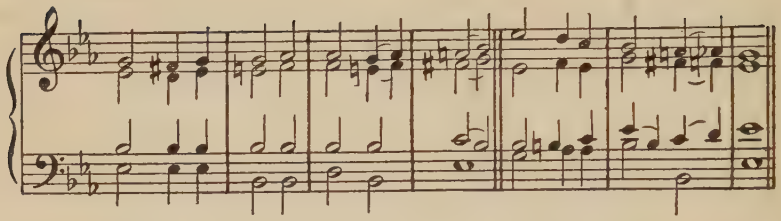
CADENCE IN THE FOUR-CADENCE PERIOD.

For general observations in regard to cadences the student is advised to re-read Elementary Theory, Lesson X., and Elementary Harmony, Lesson XI.

In the more modern writing of four-line tunes there is a tendency, similar to that which was observed in the chant, to minimize the value of the first and the third cadences. This may be done either by causing cadences to halt upon an unimportant triad, or by making its final chord dissonant. In the latter case the dissonant chord is resolved upon the beginning of the following line, and this dissonant chord is sometimes even a chromatic attendant:



Deane.



THE ONE-PERIOD PART-SONG.

The one-period part-song is not often found except as the setting of a folk-song. Its method of construction is substantially that of the four-line hymn-tune. In general, however, the harmonization of a folk-melody relies far more upon the non-harmonic tones than upon chords. Rich effects of chromatic chords and free modulations are out of character. Diatonic melodies and scale chords should always predominate. With this exception the student should find no difficulty in creating simple settings of four-line secular verses.

EXERCISES IN THE WRITING OF ONE-PERIOD FORMS.

1. Writing melodies in four cadence-group periods, utilizing the various means of producing climax, contrast and proportion discussed in this lesson.

2. Write melodies in four cadence-group periods in which change of group-form takes place.

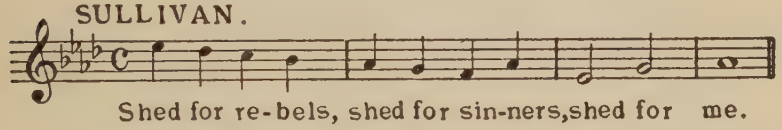
3. Harmonize the melodies just written, using cadences and modulation according to the hints given in this lesson.

Before spending much time upon these exercises the student is advised to pass to the following lesson; after which he can with still more profit get additional practise in making musical settings of four-line verses and other material for the one-period form.

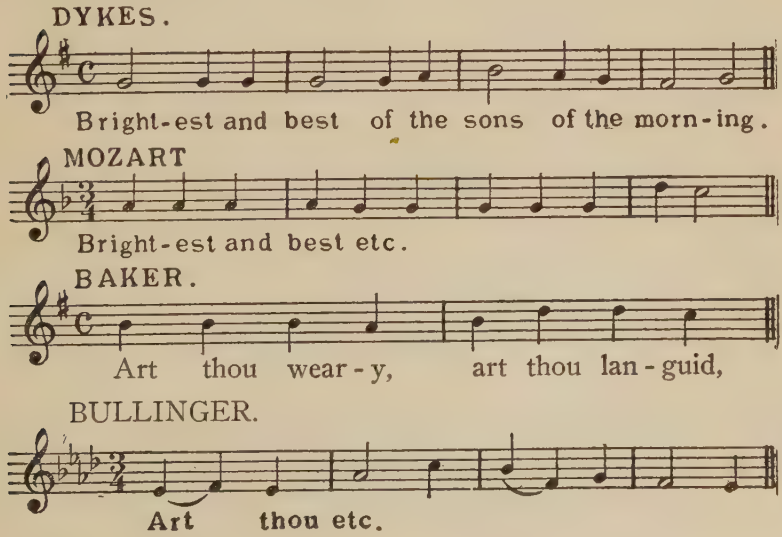
LESSON XI.

RHYTHM IN VOCAL MUSIC.

To anybody who examines with care the rhythm of the tunes, and of the hymns, of a standard hymnary, it is apparent that the tune lines are far more regular than those of the hymns. So great a disparity as eight syllables in one line against three in another receives a musical setting of two regular accent-groups to the cadence-group; the conformity being obtained by greater length of notes or by groups of notes to the syllables in the shorter phrase line:



Again, a dactylic phrase is set almost as frequently to a musical meter (accent-group form) of triple time as of duple time; or a poetical spondee receives often a musical meter of triple time:

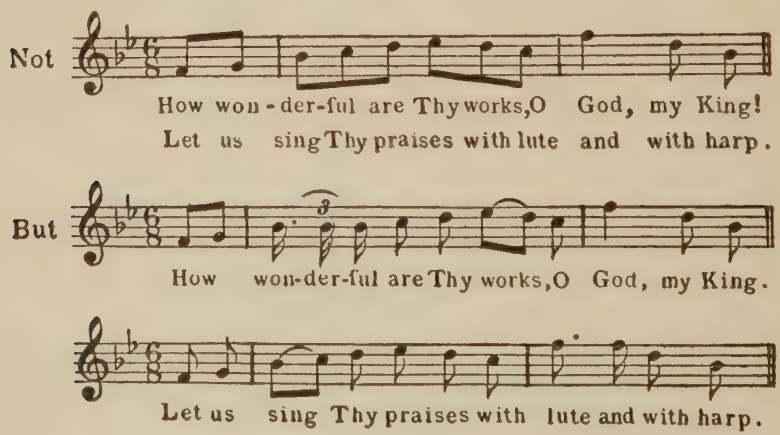


In the setting of anthems in the smaller forms, such as Calls to Worship, Responses, etc., the music, too, is found to be constructed with regular cadence-groups, although the words have the freedom which belongs to a prose sentence.

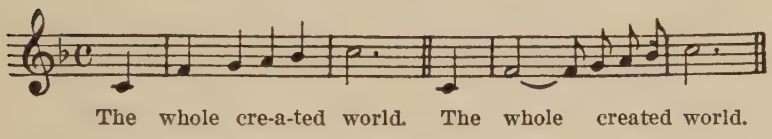
It is, then, a matter of importance to understand the principles which guide one in making musical settings to words.

Accent in Words and in Music.

In English prose or poetry, as well as in music, the accents occur with every two, three, or four pulses (beats). It would, therefore, seem to be the simplest of rules that the accents of speech should coincide always with the accents of music. This is a well-nigh invariable rule in good music. Thus, the following melody as a setting for the words, "How wonderful are Thy works, O God, my King!" or for the words, "Let us sing Thy praises with lute and with harp," each of which has exactly the same number of syllables as there are notes to the melody, cannot be sung with a note to the syllable. The proper modifications given below illustrate the rule:

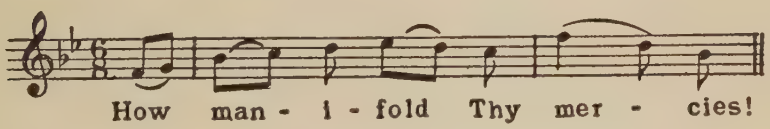

Not
How won-der-ful are Thy works, O God, my King!
Let us sing Thy praises with lute and with harp.
But
3
How won-der-ful are Thy works, O God, my King.
Let us sing Thy praises with lute and with harp.

An exception to the rule which is more apparent than real, occurs when the less important speech accents are run over in a somewhat rapid musical phrase that seems to give no stress upon some of the accented syllables:

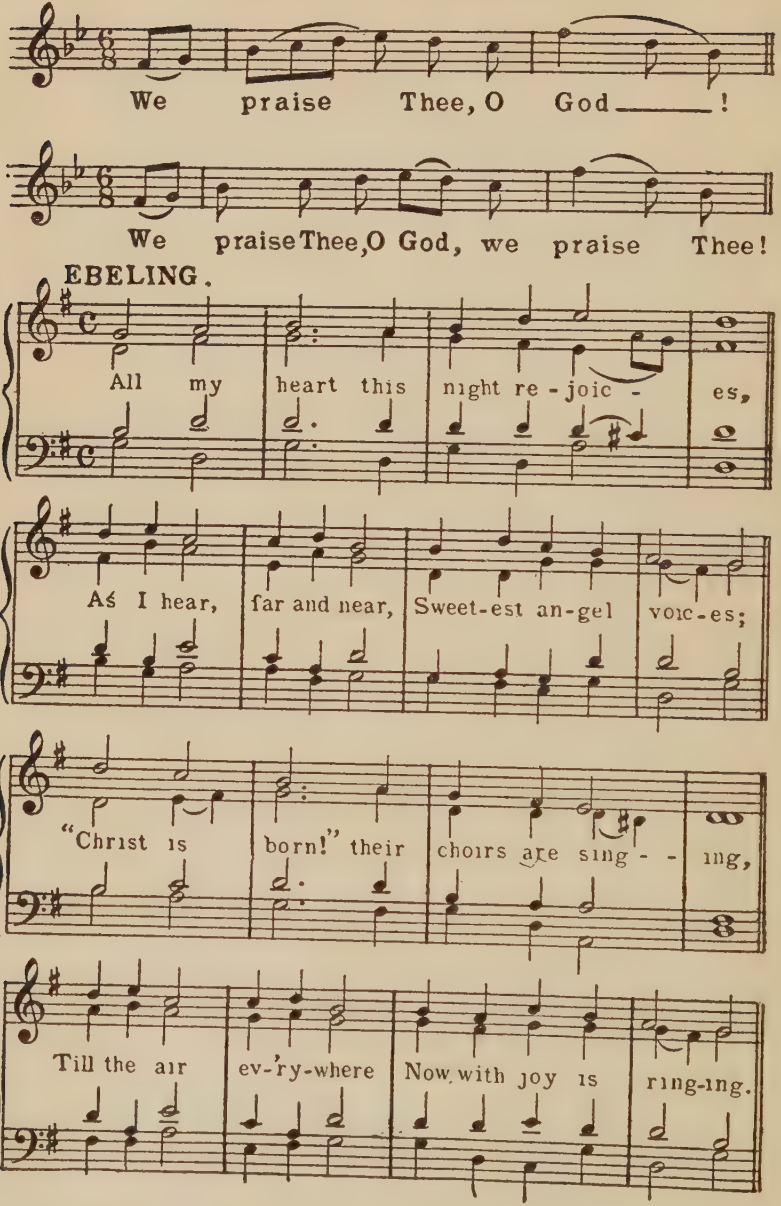


Frequently, but not always, the converse of this rule applies; namely, that the unaccented syllables of speech should remain unaccented in music.

The exceptions to this latter rule are usually due to the expansion or contraction of the verse line to fit the regularity of the musical cadence-group. Thus the words, "How manifold Thy mercies!" to the musical phrase already used for illustration would require an accent on the second syllable of "mercies" and probably also on the third syllable of "manifold":



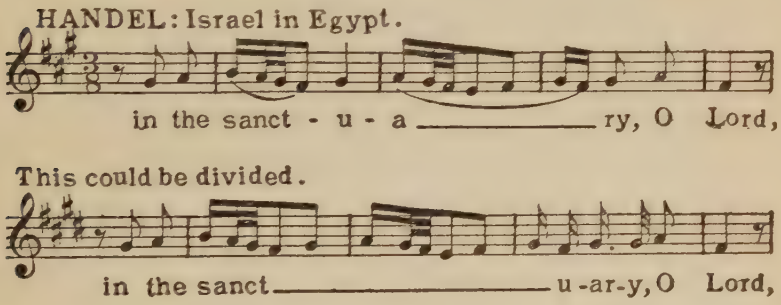
While an attempt to set the words, "We praise Thee, O God!" to this same phrase might cause through the musical accent such a peculiar effect of two syllables to the words "praise" and "God" that one would prefer to repeat some of the words in order fittingly to fill up the musical phrase:


We praise Thee, O God ——— !
We praise Thee, O God, we praise Thee!
EBELING.
All my heart this night re - joic - es,
As I hear, far and near, Sweet-est an-gel voic-es;
"Christ is born!" their choirs are sing - - ing,
Till the air ev-'ry-where Now with joy is ring-ing.

When the task is one of setting poetic phrases, the poets themselves frequently are to blame for awkward cases of unaccented syllables in accented places of the music. Thus, the familiar hymn, "Father, I know that all my life," in all of its subsequent stanzas starts with an unaccented syllable. As a result the musical setting of the hymn must be so made that we sing "Fa-*ther*" in the first verse.

But still more frequently, in fact, constantly, we meet the cases where in the adjustment of the verse line to fit the cadence-group the final strong musical accent is compelled to utilize an unaccented syllable, as for example, see Ebeling, page 380.

In some cases where expansion takes on a florid character musical accent must be given to a whole succession of unaccented syllables, but even here by skilful treatment some of the difficulties can be avoided:



In accordance with the observations made in the foregoing paragraphs, the musical setting of poetry should be made in the following way:

1. Examine each line of the verse to determine its two main accents. Set the syllables as the main measure-accents.

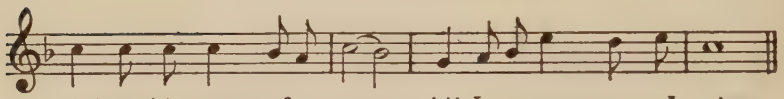
2. If there still remain syllables or words that plainly require an accent, treat them as alternating subordinate accents.

3. If syllables are wanting to complete the subordinate accents necessary, use unaccented syllables or continue the music over from a main accent.

The two following examples will illustrate these rules:

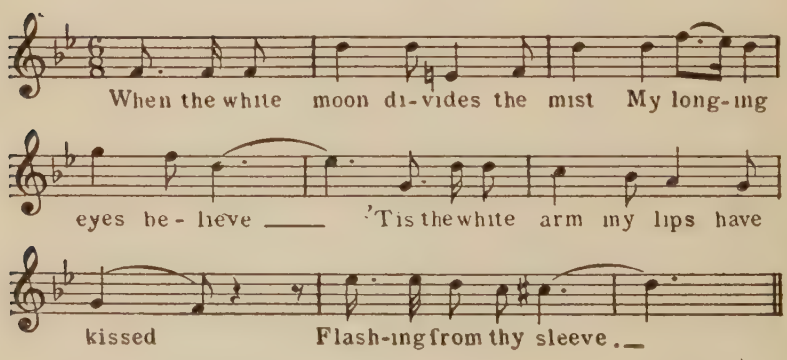
Ask nothing more of me, sweet:
All I can give you, I give.

—*Swinburne.*

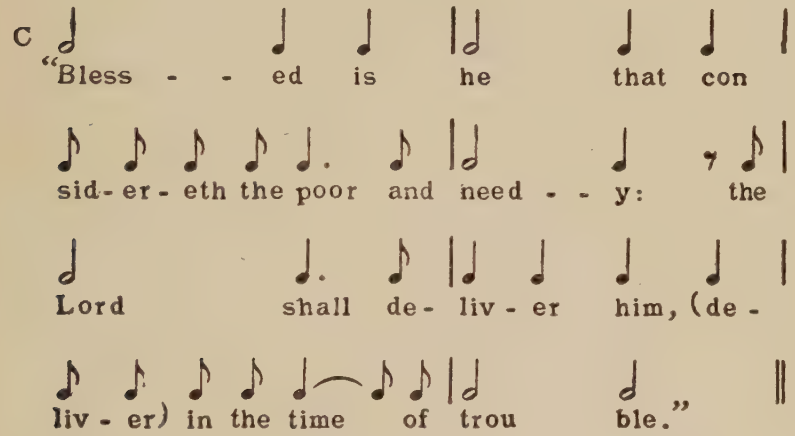


When the white moon divides the mist—
My longing eyes believe
'Tis the white arm my lips have kissed
Flashing from thy sleeve.

—*C. D. G. Roberts.*


When the white moon di-vides the mist My long-ing
eyes be-lieve 'Tis the white arm my lips have
kissed Flash-ing from thy sleeve.

In the setting of prose the accents of the music and of the words must coincide. The problem, therefore, is simply how to fit the words to the regularity of the musical accent-groups. Repetition of words or of phrases is customary, and within limits defensible. Thus, in the following sketch the rhetorical importance of the word "deliver" justifies its repetition:

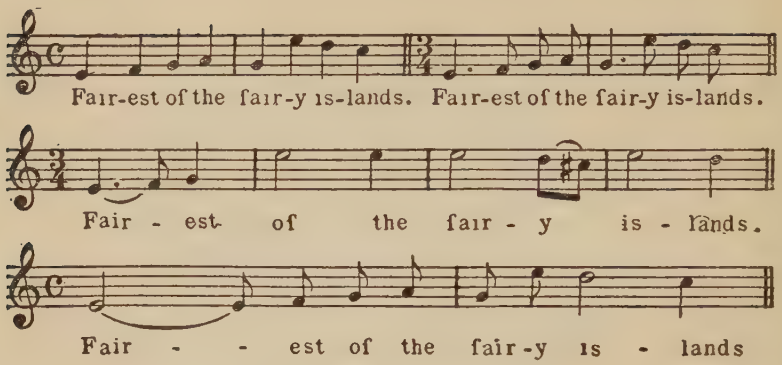


Accent-group Form in the Setting of Poetry.

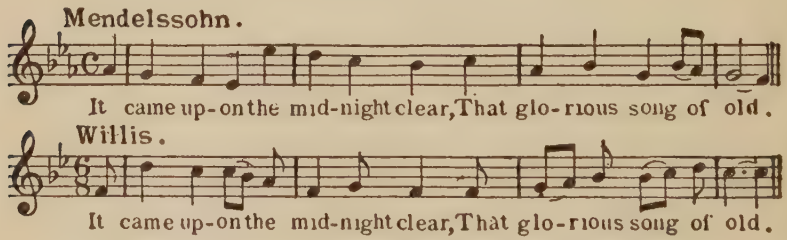
Duple and triple time are for the most part determined by musical, not by poetical considerations. Verse with accents which come once in two, once in three, or even once in four syllables, yields, with equal facility, a setting in the two-beat or in three-beat accent-group. For example, see top of page 384.

But the esthetic effects of duple and of triple time are different; the accent-group by threes is less dignified, more graceful, in general, lighter.

In setting words to music, therefore, after determining the accents, principal and subordinate, the student must



choose his type of accent-group in accordance with the underlying spirit of the composition. This, of course, is not to say that no serious composition is done in triple rhythm, or that no lightly balanced airy effects are possible in duple rhythm; still the recognition of the difference in group character will always make for effectiveness of the music. Notice, for example, two well-known hymn-settings of "It came upon the midnight clear":


Mendelssohn.
It came up-on the mid-night clear, That glo-rious song of old.
Willis.
It came up-on the mid-night clear, That glo-rious song of old.

In one the steady onward sweep of the duple rhythm emphasizes the thought of the "Glorious song of old"; in the other the lightness of the rhythm gains its appropriateness, if at all, from the merry hearts of the singers at the Christmastide.

Tempo in Speech and in Music.

In determining the character of the composition much depends upon pace. Words in music, seldom, if ever, go faster than the usual pace of the words in speech; but very often the structure of the music requires one to enunciate the words much more slowly than in speech. It is evident, therefore, that the question of pace is mainly a question of the musical beat.

The normal tempo for music is apparently that in which the beats follow one another about as fast as heart-beats. When the beats are much more rapid than this the time seems quick, when they are much slower than this the time seems slow. As one gets farther from the normal pace the characteristic feeling which belongs to the duple or to the triple group has less and less of weight. A point is finally reached at which by increase in the rapidity the entire group is reduced to a single beat; or by decrease in the rapidity the beat becomes so over-weighted that it disintegrates, and becomes itself a group.

An interesting illustration of the effect of tempo upon the characteristic feeling of the triple group is to be found in the song from Handel's opera "Xerxes," entitled "My Plane Tree." As it there appears, in order to illustrate the words of affectionate description of the tree, the melody is taken at minuet tempo, and the composition is graceful, and, on the whole, light. But for many years it has been played as an instrumental composition at a much slower pace, with a greatly increased effect of dignity, under the name of Handel's Largo.

Another interesting illustration of the effect of tempo upon rhythmic feeling may be seen in the Mendelssohn Song without Words, Op. 19, No. 6, where too slow a pace takes

away wholly the graceful sway of the Gondellied in $\frac{6}{8}$ time, and reduces the piece to a mournful lament in simple $\frac{3}{8}$ rhythm.

Illustrations of the reverse process by which, through quickening of the tempo, the piece is deprived of its strength, or of its pathos, would not be hard to find.

Exercises in Rhythms in Vocal Music.

1. Determine the place of the musical accents in many four-line verses, and in prose (scriptural) sentences.

2. Write melodies suited to the character of the sentiment of the verses which have been used in Exercise 1, and complete the harmonization of them in accordance with the instructions of the previous lesson.

LESSON XII.

VOCAL HARMONY IN LESS OR MORE THAN FOUR PARTS.

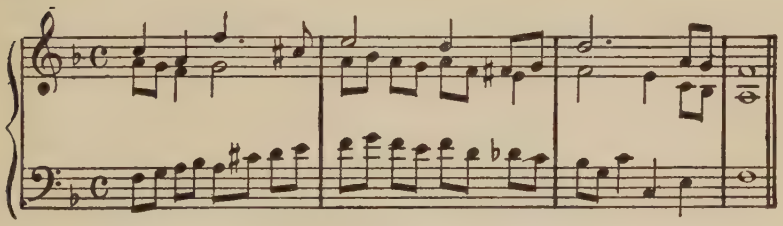
While it is true that vocal writing, more frequently than not, is in four parts, yet composers can gain certain advantages from the use of a less or of a greater number of voices.

Three-voice Writing.

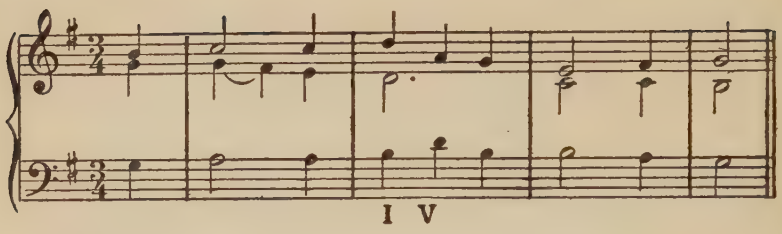
The advantage to be gained from the use of but three voices is that the three individual parts can be heard more clearly, and therefore whatever of beauty there be in the melodies of these individual parts has more of an opportunity

of getting to the ear of the listener. Conversely, it is true that the melodies must be made more interesting; that is to say, have more engaging rhythm, have more fluent line, have more freedom in skip.

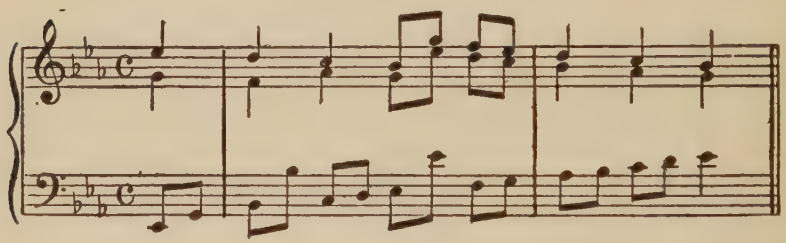
It is evident that, since all chords have either three, four, or five notes, an important question in three-voice writing is that of the omission of notes in a chord. While in general the rules in regard to the most important notes in the chord, or the most easily omitted notes in a chord, are the same as those for four-part writing, it is also true that sometimes the note best to be omitted on general principles is the one that happens at the moment to be the easiest and best for the melodic line, while the note which theoretically ought not to be omitted is specially difficult to reach. Thus:



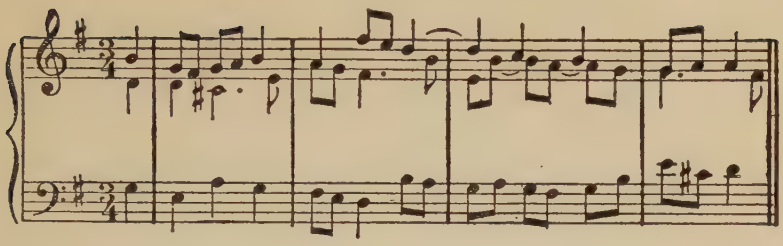
In writing in two or three parts quite constantly the effect of rhythm comes to aid in the understanding of the chords. Thus, for example, in a place where the rhythmic treatment of the music calls for the tonic chord, that chord may be understood, unless some note contradicts such an understanding, even although the tonic note itself be absent from the writing. Again, although the important character-giving note of a consonant triad is its third, since by it we learn whether the triad is major or is minor, if the treatment of the rhythm in the music and the use of other chords has made clear the key, then the triad, although it is without its third, is felt to be distinctly major or distinctly minor, as the case may be, as for example:



In regard to the distance apart of the voices in three-part writing, it needs only to be added that just because there are but three notes present the music will be apt to sound thin if the upper voice is for any length of time too far away from the voices that are below. And yet the very freedom of melodic treatment which has already been suggested gives larger opportunity for the voices both to recede from each other and to approach each other:



Notice finally that repetition of a given chord, or the movement from one note to another of the chord in one voice, while the other voices remain quiet, frequently affords the opportunity of presenting ultimately all of the notes of a four or of a five-tone chord. In such case the final position of the chord should have the essential notes required for good resolution, unless there be opportunity for a double resolutions (see page 323), or an elipsis (see page 335).



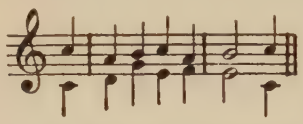
It is in the resolution of tendency chords that three-part writing is strictest; for if the important tones of a tendency chord are present and resolve properly, the music is altogether understandable.

Two-voice Writing.

What has been said about three-voice writing, in regard to the individuality of the melodies, the reliance to be placed upon rhythm, upon consecutive sounding of the notes of a chord, and upon the importance of proper resolutions, could be repeated with still more emphasis in speaking of two-voice writing. Indeed, the emphasis which has to be placed in two-part writing upon a free and flexible melody with considerable use of movement from chord note to chord note, practically takes this out of the vocal into the instrumental type. *Vocal duets* are usually planned with an accompaniment which completes the harmonic deficiency; *hence such writing does not properly come under the head of two-voice writing.* In this latter the two parts are assumed to have substantially equal importance; hence each must have such perfection in itself that the art is more correctly a matter of counterpoint than it is of harmony. Since, however, modern counterpoint is based upon harmony, two-voice writing may be properly presented in these lessons.

A few additional simple rules are all that the student needs:

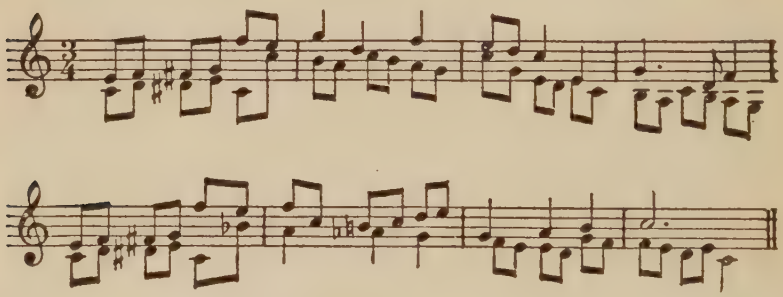
1. Avoid the use of consecutive perfect intervals; that is, of a fifth followed by a fifth, octave followed by octave, octave by fifth, fifth by octave:

Not  But

2. Use thirds and sixths freely (but see Rule 3, which follows):

3. Make sparing use of similar or parallel motion. More than three or four parallel thirds or sixths in succession is of questionable value. The chief reliance is upon contrary motion.

4. Make free use of non-harmonic tones whenever this can be done without rendering it difficult to understand the harmonic basis:

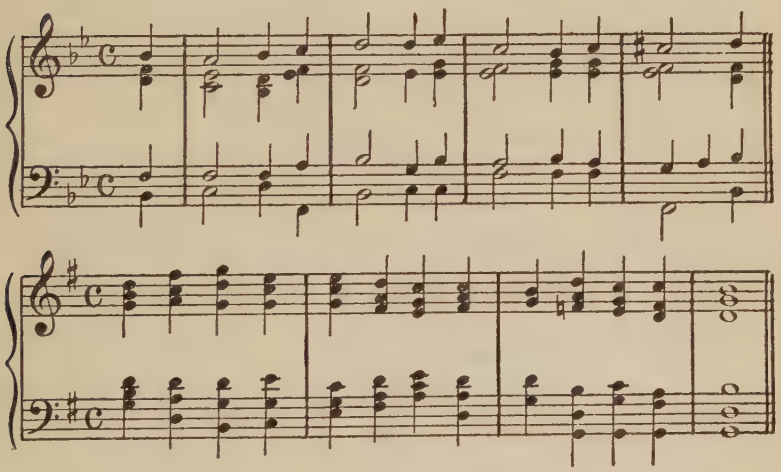


Vocal Writing in Five or More Parts.

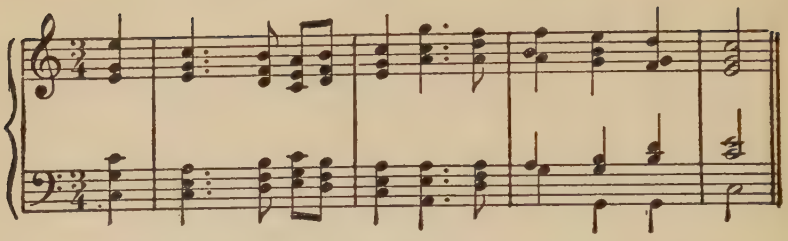
It is plain that the problem of special importance when writing in more than four parts is that of determining what notes to double. This question is a very different one from that found in instrumental music where four real parts, by temporary or continuous doubling of melodies at octave, become five, six, seven, or more apparent parts. In vocal writing it is to be assumed that each part creates its own

independent melody. There are, therefore, two aspects under which the problem of doubling arises: first, that of the chord; second, that of the melody.

1. In regard to the best notes to double in a chord the rules of four-part writing are still, in the main, to be held to. It should be noticed, however, that while strong tendency notes ought not to be doubled any more than is the case in four-part writing, yet tendency chords almost inevitably contain notes in which there are two possible resolution tones; as, for example, the root of the dominant seventh chord in fundamental position, the fifth of a dominant seventh chord, or the third or fifth of many subordinate sevenths. These notes, therefore, admit of doubling without difficulty:



Again, it is true that in the use of chords which may appear as passing chords, the passing effect frequently can be in either direction, and in such case tones that in a real chord would seem to have a fixed tendency in one direction are free to be doubled by parts that go in contrary motion to each other:



For the most part, writing with this extra number of voices is for chorus. Here strength of chord effect and smoothness of part movement is especially to be desired. For just as it was pointed out that in writing for three voices greater freedom in the individual melodies was to be expected, so here the converse is true. Hence:

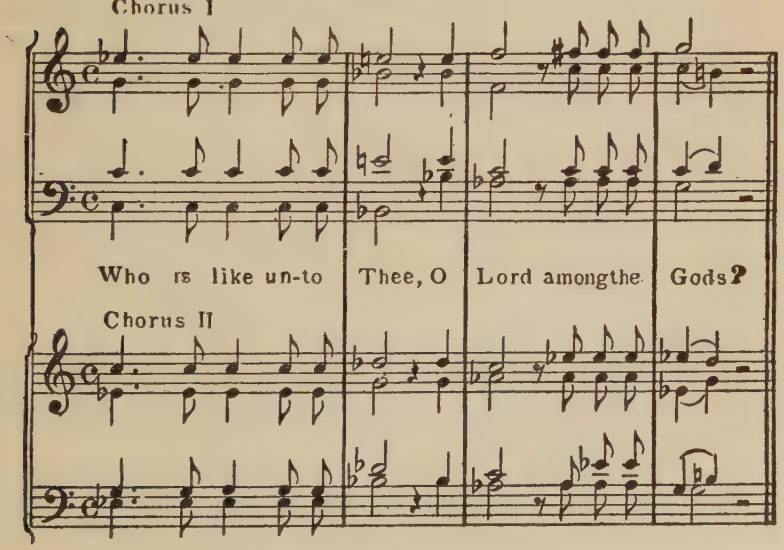
2. Much of the doubling which occurs in music in five or more real parts is brought about through the necessities of the melodic treatment. One is apt to find the melodies in conjunct motion, with the exception of the outer parts. Such simplicity of writing often justifies a doubling, particularly in consonant triads, of notes which from the point of view of chord balance alone would not be justified. Nevertheless it should be noticed that so far as possible composers avoid unpleasant chord balance; and, especially as the number of voices increases, are apt to allow inner parts to cross each other, even when they are made to do so by skip. A still more frequent cause for such crossing of the parts is to avoid parallel fifths or octaves with some other voice part.

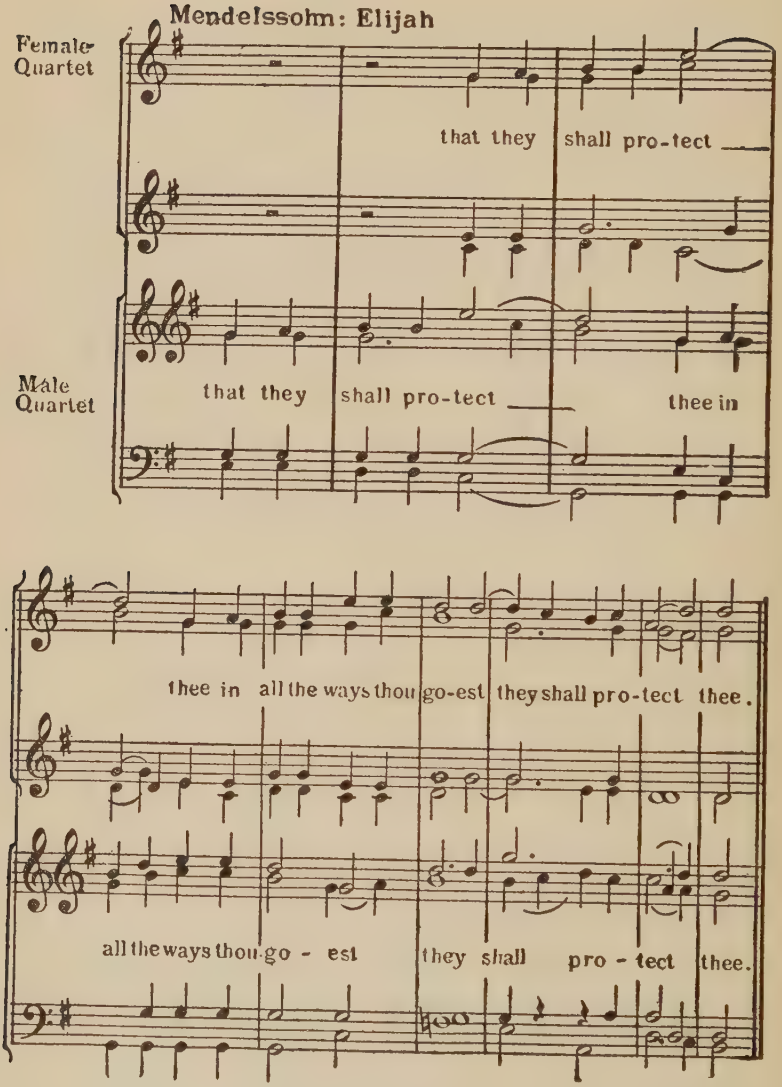
Although vocal writing may be carried out to any number of real parts, it is, at the present time, seldom used beyond eight. Within that number two distinct methods of treatment are found: one, in which the parts chosen all continue their independent melodies from beginning to end; the other, in which the parts are divided into two groups, making a double chorus. With this latter method there is opportunity for much answering of chorus to chorus, antiphonally;

or reinforcing of one chorus with the other; so that writing in the full number of parts is carried on only during a portion of the music. This affords variety and avoids the continuous impression of weightiness which can easily become tiresome. The double chorus may be constituted with equal choirs of mixed voices, or with a male and a female choir, or with two choirs that overlap each other, but one of which is in the main higher pitched.

It is not the object of this lesson, however, to discuss the forms of composition used in chorus writing, but simply to set forth a method of treating harmony. Choruses in which the application of this method is made are usually much more extended than the limits of a single period. The student who desires to write music in five or more real parts is, therefore, advised to seek further guidance in the works of composers who have written in this style, and in the precepts of treatises on composition:

Handel: Israel in Egypt




Mendelssohn: Elijah
Female Quartet
that they shall pro-tect
Male Quartet
that they shall pro-tect thee in
thee in all the ways thou go-est they shall pro-tect thee.
all the ways thou go - est they shall pro - tect thee.

Exercises in the Use of Two, Three, Five or More Real Parts.

1. Add a single under part to the melodies of exercise two, Lesson II., so as to produce good two-part writing.

2. Write three-part settings of some of the verses treated in the previous lesson.

3. Write five-part settings of some of the verses treated in the previous lesson.

4. Write short double-choruses in eight real parts.

CONCLUSION.

The student who has carried through faithfully the work mapped out in the three series of lessons of which this paragraph is the conclusion should be encouraged to take the further step which connects technical study with practical composition. It is at the same moment the simplest and the hardest step. One who has accumulated harmonic material and facility in handling it should feel the demand for its use coming from within. This demand should take the form not alone of harmonic tasks laid out by the teacher but also of musical ideas or poetical ideas, which invite the student to apply this or that material within his power to the embodiment or development of these ideas. Parallel to this work which springs out of the creative impulse, and as a further guide to the student, he should take up the study of Applied Harmony, or Elementary Composition, which step by step makes the special application of harmony to the writing of small musical forms, such as songs, pianoforte pieces, anthems, and part-songs.

This study is the logical complement of the study of harmony; yet the closer one gets to actual composition the more certain it is that that particular gift called "fantasie"

cannot be taught. One may show how a given chord is made, and can be handled, how a certain type of melody is constructed, how a certain change of tonality can be effected, but to reveal the moment when that chord would be the key to the listener's heart, when that melody will seem to have dropped from Heaven, when that change of key will lift the soul to serener regions,— this is beyond the teacher. But all of these things may perhaps reveal themselves to the patient worker who delves in tones because he cannot help himself. To such a one the step forward from harmony to its application is inevitable; and the problems presented, together with which should come much study of the works of great composers, will assist him in self-expression,— the goal of every artist.

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A.—American Music.
E.—Essentials of Music, two volumes, i, ii.
F.—Foreign Music.
I.—Instruments.
O.—Operas, two volumes, i, ii.
O. M.—Oratorios and Masses.
T.—Theory.
See also Dictionary and Musical Biographies.

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